



Fillmore McPherson
First Selectman

TOWN OF MADISON
CONNECTICUT 06443-2563
BOARD OF SELECTMAN

Alfred J. Goldberg
Robert G. Hale
Diane L. Stadterman
Joan M. Walker

April 13, 2015

INVITATION TO BID

PURCHASE OF ONE 1500 GPM CUSTOM BUILT
RESCUE PUMPER

The Town of Madison and Madison Hose Co. # 1 are requesting bids for a 1500 GPM custom built Rescue Pumper. Sealed proposals will be received at the Selectmen's Office, 8 Campus Dr. Madison, CT. 06443, until 3:00 PM on May 22, 2015. The Bids will be opened immediately following the deadline in room A at the Town Campus.

It is the sole responsibility of the bidder to see that the bid is in the hands of the proper authority prior to the bid submittal deadline. Bids will not be accepted by e-mail, facsimile, or any other electronic transmission.

The specifications and the form of proposal, on which the bids must be submitted, are contained within this packet.

The Board of Selectmen of the Town of Madison and Madison Hose Co. # 1 Inc. reserves the right to accept or reject any or all options, bids, or proposals; to waive any technicality in a bid or part thereof submitted, and to accept the bid deemed to be in the best interest of the Town of Madison and Madison Hose Co. # 1 Inc.

Fillmore McPherson
First Selectman

**MADISON HOSE COMPANY # 1
SPECIFICATIONS FOR ONE (1)
1500 GPM CUSTOM BUILT
RESCUE PUMPER**

<div> <div>SPECIFICATIONS FOR ONE (1) 1500 GPM CUSTOM PUMPER</div> </div>	Bidder Complies	
	Yes	No
<div> <div> <div>INTRODUCTION</div> <div>PROPOSAL REQUIREMENTS</div> </div> <div> <div>GENERAL INFORMATION</div> <p>It is the intent of these specifications to secure apparatus constructed to withstand the severe and continuous use encountered during emergency fire fighting services. The apparatus must be of the latest type, carefully designed and constructed with due consideration to the nature and distribution of the load to be sustained.</p> <p>These specifications detail the requirements for general design criteria of cab and chassis components, aerial device, fire pump and related components, water tank, fire body, electrical components, painting, and equipment. In evaluating the bid proposals to determine which proposal is the most advantageous, these major items shall be considered.</p> <p>Apparatus and equipment must meet the specific requirements and intent of the requirements as specified herein. All items of these specifications shall conform to the character of the proposed apparatus and the purpose for which it is intended. Criteria as specified by the National Fire Protection Association Pamphlet No. 1901, latest edition, entitled "Suggested Specifications for Motor Fire Apparatus", as approved by the American Insurance Association and International Association of Fire Chiefs, are hereby adopted and made a part of these specifications the same as if they were written out in full, insofar as they apply and are not specifically modified in the following detailed specifications. Each bidder shall provide only that equipment as required in the following specifications.</p> <p>The fire apparatus and equipment to be furnished in meeting these specifications must be the products of an established, reputable fire apparatus and/or equipment manufacturer. Each bidder shall furnish satisfactory evidence of the manufacturer's ability to construct, supply service parts and technical assistance for the apparatus specified. Each bidder must state the location of the factory and location for post delivery service.</p> <div>BID COMPLIANCE INSTRUCTIONS</div> <p>Each bidder must indicate his compliance with these specifications by marking "YES" or "NO" in the appropriate column for each individual paragraph of this specification. Indicating "YES" to a paragraph shall mean full compliance; indicating "NO" shall mean an exception is being taken. Any deviation from the specification, no matter how small, must be so annotated. All exceptions must be fully explained on a separate page, titled "Exceptions", giving reference to the page and paragraph where the exception is being taken. Failure to comply with this requirement shall result in the bid proposal being rejected.</p> <p>The Madison Hose Company shall be the sole arbiter as to what exceptions may be allowed or disallowed. In the event a bidder fails to make any indication of compliance for any or all provisions it will be assumed that the bidder is taking total exception to the specification and the bid shall be disallowed.</p> <div>FIRE APPARATUS DOCUMENTATION</div> <p>The contractor shall supply, at the time of delivery, at least one (1) copy of the following documents:</p> <p>The manufacturer's record of apparatus construction details, including the following information:</p> <ul style="list-style-type: none"> Owners name and address Apparatus manufacturer, model and serial number <div> <div>MADISON HOSE COMPANY # 1</div> <div>Page 1</div> </div> </div> </div>		

<div> <div>SPECIFICATIONS FOR ONE (1) 1500 GPM CUSTOM PUMPER</div> </div>	Bidder Complies	
	Yes	No
<div> <ul style="list-style-type: none"> Chassis make, model and serial number Front tire size and total rated capacity in pounds Rear tire size and total rated capacity in pounds Chassis weight distribution in pounds with water and manufacturer mounted equipment, front and rear Engine make, model, serial number, rated horsepower, rated speed and governed speed Type of fuels and fuel tank capacity Electrical system voltage and alternator output in amps. Battery make, model and total capacity in cold crank amps (CCA) Transmission make, model and serial number. If so equipped chassis transmission PTO(s) make, model and gear ratio Pump make, model, rated capacity in gallons per minute and serial number Pump transmission make, model, serial number and gear ratio Water tank certified capacity in gallons Paint manufacturer and paint number(s) Company name and signature of responsible company representative Certification of slip resistance of all stepping, standing and walking surfaces. <p>The pump manufacturer's certification of suction capability.</p> <p>The copy of the apparatus manufacturer's approval for stationary pumping applications.</p> <p>The engine manufacturers certified brake horsepower curve for the engine furnished, showing the maximum governed speed.</p> <p>The pump manufacturer's certification of hydrostatic test.</p> <p>The Underwriters Laboratory certification of inspection and test for the fire pump.</p> <p>The certification of the test for the fixed power source.</p> <p>Weight documents from certified scale - showing actual loading on the front axle, rear axle(s) and overall vehicle (with the water tank full but without personnel, equipment and hose) shall be supplied with the complete vehicle to determine compliance with NFPA-1901.</p> <p>Written load analysis and results of electrical performance tests.</p> <p>The certification of water tank capacity by the tank manufacturer.</p> <p>The chassis shall be certified by the apparatus manufacturer as conforming to all applicable Federal Motor Vehicle Safety Standards in effect at the date of contract. This shall be attested to by the attachment of a FMVSS certification label on the vehicle by the contractor who shall be recognized as the responsible final manufacturer.</p> <p><u>VEHICLE RECORDS</u></p> <p>The successful bidder shall be responsible for preparing and maintaining a record file of parts and assemblies used to manufacture the apparatus. These records shall be maintained in the factory of the bidder for a minimum of twenty (20) years. File shall contain copies of any and all reported deficiencies, all replacement parts required to maintain the apparatus, and original purchase documents including specifications, contract, invoices, incomplete chassis certificates, quality control reports and final delivery acceptance documents. The Madison Hose Company shall have access to any and all documents contained in this file upon official written request.</p> </div>		
<div> <div>MADISON HOSE COMPANY # 1</div> <div>Page 2</div> </div>		

SPECIFICATIONS FOR ONE (1) 1500 GPM CUSTOM PUMPER

Bidder
Complies

Yes No

BIDDER INSTRUCTIONS

Bids shall be addressed and submitted in accordance with the advertised "Bid Notice". The words "Fire Apparatus Bid", the date, and the bid opening time must be stated on the face of the bid envelope. It is the bidder's responsibility to see that their proposals arrive on time. Late proposals, telegram, facsimile or telephones bids shall not be considered.

Each bid shall be accompanied by a detailed description of the apparatus and equipment it proposes to furnish. It is the intent of these specifications to cover the furnishing and delivery of a complete and soundly engineered apparatus equipped as specified. Minor details of construction and materials, where not otherwise specified, are left to the discretion of the contractor, who shall be solely responsible for the design and construction of all features.

Brand names or model numbers have been specified for some items. These have been carefully selected because of their reliability and availability for replacement locally. In order to be most responsive, items named, or an item "equal to" the particular item specified by brand name or model, should be contained in the bid proposal. It is the bidder's responsibility to prove to the Madison Hose Company that an item bid as "equal to" a particular specified item, is truly of equal quality, design, and function. The Madison Hose Company maintains the right to make a final decision as to the acceptability of an item bid as "equal to" a particular specified item.

No exception shall be allowed for any of the aforementioned instructions. Bids not submitted in accordance with these instructions shall be rejected.

"TOP OF THE LINE" CHASSIS

Bidders shall propose a custom built chassis, which is "Top of the Line" including the cab, electrical system and drive train. NO EXCEPTIONS!

TIMELY PROPOSALS

Proposals shall be submitted to First Selectmen's Office, 8 Campus Dr., Madison, CT. 06643, no later than 3 PM on May 22, 2015. It is the bidder's responsibility to see that their proposals arrive on time. Late proposals, facsimiles, telegrams, or telephone bids shall not be considered.

GENERAL CONSTRUCTION

The complete apparatus, assemblies, subassemblies, component parts, etc., shall be designed and constructed with the due consideration to the nature and distribution of the load to be sustained and to the general character of the service to which the apparatus is to be subject. All parts of the apparatus shall be designed with a factor of safety, which is equal to or greater than that which is considered standard and acceptable for this class of equipment in fire fighting service. All parts of the apparatus shall be strong enough to withstand general service under full load. The apparatus shall be so designed that the various parts and readily accessible for lubrication, inspection, adjustment and repair. Bidder's specifications must meet minimum requirements of N.F.P.A. Pamphlet #1901; Underwriters Laboratories, Inc.; and all State and Federal Department of Transportation vehicle regulations at time of sale of unit.

The apparatus shall be designed and constructed, and the equipment so mounted, with due consideration to distribution of the load between front and rear axles that all specified equipment, including a full complement of specified ground ladders, full water tank, loose equipment, and firefighters shall be carried without overloading or injuring the apparatus.

SPECIFICATIONS FOR ONE (1) 1500 GPM CUSTOM PUMPER

Bidder
Complies

Yes No

PRODUCT LIABILITY INSURANCE

Each bidder shall supply proof of product liability and facility insurance equal to or exceeding \$30,000,000.00. This shall be provided as part of the proposal. NO EXCEPTIONS!

GARAGE INSURANCE LIABILITY STATEMENT

Garage insurance is not acceptable. NO EXCEPTIONS!

SINGLE-LINE RESPONSIBILITY

Since the Madison Hose Company desires to eliminate divided responsibility on the part of the manufacturers, only manufacturers who build their own fire apparatus cab, chassis, body and aerial device shall be considered. The apparatus must be built and painted in a facility owned and operated by the bidder by a staff that is directly employed by the bidder. At least fifteen similar units must have been sold and delivered of the type described herein. The entire apparatus (to include cab, chassis, body, pump, water tank and aerial device) MUST be manufactured in the United States! NO EXCEPTION SHALL BE ALLOWED TO THIS REQUIREMENT!

The bidder shall state if single line responsibility is being proposed.

ADDENDA AND INTERPRETATIONS

No interpretation of the meaning of the specifications or other contract documents shall be made to any Bidder verbally. Every request for such interpretation shall be in writing and addressed to the Madison Hose Company, and must be received at least ten days prior to the date fixed for the opening of the bids to be given consideration. Any and all such interpretations and any supplemental instructions shall be in the form of written addenda to the specifications which, if issued, shall be mailed by certified mail to all prospective Bidders not later than five days prior to the date fixed for the opening of bids. Failure of any Bidder to receive any such addendum or interpretation shall not relieve any Bidder from any obligation under his bid as submitted. All addenda so issued become a part of the contract documents.

PAINT PERFORMANCE CERTIFICATION

The finish paint shall be certified by the apparatus manufacturer as conforming to all applicable Commercial Vehicle Paint Standards in effect at the date of contract. This shall be attested to by the attachment of a PPG certification.

SPECIAL CONDITIONS

No bid shall be considered unless the bidder can meet the special conditions stated herein.

The complete apparatus must be manufactured in the United States of America.

PRICES AND PAYMENTS

The bid price shall be F.O.B. Destination, on a delivered and accepted basis at the Madison Hose Company.

Total price on bidder's proposal sheet must include all items listed in these specifications. Listing any items contained in the specification as an extra cost item, unless specifically requested to do so in these specifications, shall automatically be cause for rejection.

<div> <div>SPECIFICATIONS FOR ONE (1) 1500 GPM CUSTOM PUMPER</div> </div>	Bidder Complies	
	Yes	No
<p>Bidder shall compute pricing less federal and state taxes. It is understood that any applicable taxes shall be added to the proposed prices, unless the Madison Hose Company furnishes appropriate tax-exempt forms.</p> <p><u>BID EVALUATION</u></p> <p>Madison Hose Company, Fire Chief and Purchasing Agent shall evaluate bids received. This evaluation shall be based as a minimum on the following criteria:</p> <ul style="list-style-type: none"> • Quality of Product • Commitment to the general conditions contained herein, including warranty. • Completeness of the proposal, i.e. the degree that it completely and accurately responds to all requirements and requests for information contained herein. • Precision of proposal • Contractor's demonstrated capabilities and qualifications. • Equipment suppliers and/or local representative's demonstrated capabilities and qualifications. • Price <p><u>EXCEPTIONS TO SPECIFICATIONS</u></p> <p>Exceptions shall be referenced to the paragraph and page of these specifications where the item appears. Drawings, photographs, and technical information about the exception shall be included as necessary. Any exceptions may be considered during the evaluation process, and the decision shall be final.</p> <p>Proposals taking total exceptions to specifications shall not be accepted.</p> <p><u>"OR APPROVED EQUAL" CLAUSE</u></p> <p>The mention in the specifications of apparatus, equipment or material by brand name or by such specified description of same as is hereby made, is intended to convey to the bidder's understanding, the degree of excellence required. Any article, equipment, or material ,which shall conform to the standards and excellence so established, and is of equal merit, strength, durability and appearance to perform the desired function, is deemed eligible for offer as a substitute. The qualifications of the offering shall be judged as to their conformance with these specifications. Any equipment offered other than herein specified shall be subject to a competitive demonstration and evaluation shall be subject to a competitive demonstration and evaluation by the using department. Such demonstration to be provided on request within ten working days after the receipt of bids.</p> <p>The result of that demonstration and evaluation shall be of prime importance in the recommendation to the governing body for the final contract award.</p> <p><u>TECHNICAL INFORMATION</u></p> <p>Bidder shall furnish free of charge, upon request, technical information, graphs, charts, photographs, engineering diagrams, steering geometry, drive train certifications, instruction guides, or other documentation as requested to show that the equipment offered fully complies with these specifications.</p> <p><u>PROPRIETARY PARTS</u></p> <p>It is the intention of the Madison Hose Company for all bidders to furnish the apparatus with major parts commonly used by the heavy-duty truck manufacturers and open market vendors where as replacement parts are more readily available and at reduced cost. The use of proprietary parts</p>		
<div>MADISON HOSE COMPANY # 1</div>	<div>Page 5</div>	

<div> <div>SPECIFICATIONS FOR ONE (1) 1500 GPM CUSTOM PUMPER</div> </div>	Bidder Complies	
	Yes	No
<p>such as but not limited to axles, suspensions, engines, transmissions, frontal air bags, electronic controls, multiplexing systems, seats, pumps, gauges, foam systems, etc., may not be acceptable by the Madison Hose Company.</p> <p><u>DELIVERY TIME</u></p> <p>Each bidder shall state the completed apparatus delivery time based on the number of calendar days, starting from the date the sales contract is signed and accepted by the apparatus manufacturer. Madison Hose Company preference is not greater than 300 calendar days.</p> <p>Delivery Time: _____ Calendar days</p> <p><u>PENALTY CLAUSE</u></p> <p>Should the bidder be unable to ship the apparatus to Madison Hose Co #1 (for local pre-delivery service) within the specified delivery time agreed upon in the signed and accepted sales contract, the Madison Hose Company may enforce a \$500 per day late delivery charge, after a grace period of Seven (7) business days has expired.</p> <p><u>BOND REQUIREMENTS</u></p> <p>Any bonds or sureties (bid, performance, or other) required by the Purchasing Organization shall be as specified below or as requested in the advertised "Bid Notice".</p> <p>A bid bond shall be submitted with the bidder's proposal. The bond shall be for an amount equal to 10% of the proposed bid price. Failure to provide an original, acceptable, valid bid bond with the proposal shall result in the immediate rejection of the bidder's proposal.</p> <p>The apparatus manufacturer must provide all bonds; bonds provided by a sales representative, dealer, distributor, or agent of the apparatus manufacturer are not acceptable.</p> <p>With respect to the qualifications of proposed bonds or sureties, the bidder's bonding company must meet the following requirements:</p> <ul style="list-style-type: none"> • An acceptable surety as outlined by the department of treasury on their most recent federal register at a limit of at least \$10,000,000; • A.M. Best rating of "A" or better with a financial rating of at least "VIII"; and licensed as a surety in the state of Connecticut. <p><u>PERFORMANCE BOND</u></p> <p>A performance bond shall be supplied by the successful bidder upon acceptance of the signed sales contract for the apparatus. The performance bond shall be for an amount equal to the full contract price (i.e. 100% bond).</p> <p><u>MATERIAL AND WORKMANSHIP</u></p> <p>All equipment furnished shall be guaranteed to be new and of current manufacture, to meet all requirements of these specifications.</p> <p>All workmanship shall be of high quality and accomplished in a professional manner so as to insure a functional apparatus with a pleasing, aesthetic appearance.</p>		
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<div> <div>SPECIFICATIONS FOR ONE (1) 1500 GPM CUSTOM PUMPER</div> </div>	Bidder Complies	
	Yes	No
<div> <div> <div>CONTRACT AWARD</div> <p>The Madison Hose Company reserves the right to reject any or all bids deemed to be unresponsive. The Madison Hose Company also reserves the right to waive any informalities, irregularities and technicalities in procedure.</p> <p>The Madison Hose Company reserves the right, before awarding the contract, to require a bidder to submit evidence of his qualifications as may be deemed necessary. Documentation, which may be required, is financial soundness, technical competency, and other pertinent qualifications of a bidder, including past performance (experience) with the Madison Hose Company.</p> <p>Upon award of contract, the sales contract shall be between the Madison Hose Company and the manufacturer of the apparatus. Contracts between the Madison Hose Company and a sales representative, dealer, distributor, or agent of the apparatus manufacturer shall not be acceptable. (No Exceptions.)</p> </div> <div> <div>SALES ENGINEER</div> <p>The successful bidder shall designate an individual to perform the contractor's sales engineer functions. The sales engineer shall provide a single point interface between the Madison Hose Company and the contractor on all matters concerning the contract.</p> </div> <div> <div>APPROVAL DRAWING</div> <p>A detailed drawing of the apparatus shall be provided to the Madison Hose Company for approval before construction begins. A copy of this drawing shall also be provided to the manufacturer's representative. Upon Madison Hose Company's approval, the finalized drawing shall become a part of the total contract.</p> <p>The drawing shall show, but is not limited to, such items as the chassis make and model, major components, location of lights, sirens, all compartment locations and dimensions, special suction, discharges, etc. The drawing shall be a visual interpretation of the apparatus as it is to be supplied.</p> </div> <div> <div>INSPECTION VISITS</div> <p>The successful bidder shall provide three (3) factory inspection trips to the apparatus manufacturer's facility. Transportation, meals, lodging, and other requisite expenses shall be the bidder's responsibility.</p> </div> <div> <div>ACCOMMODATIONS FOR FIVE (5) MADISON HOSE COMPANY PERSONNEL</div> <p>Accommodations shall be for five (5) Madison Hose Company representatives per trip.</p> <p>The factory visits shall occur at the following stages of production of the apparatus:</p> </div> <div> <div>TRIP ONE (1) AT PRE CONSTRUCTION</div> <ul style="list-style-type: none"> Pre-construction / blueprint review. </div> <div> <div>TRIP TWO (2) AT MID-POINT COMPLETION</div> <ul style="list-style-type: none"> Midpoint completion of entire apparatus. </div> <div> <div>TRIP THREE (3) AT FINAL COMPLETION</div> <ul style="list-style-type: none"> Final inspection upon completion. </div> </div>		
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<div> <div>SPECIFICATIONS FOR ONE (1) 1500 GPM CUSTOM PUMPER</div> </div>	Bidder Complies	
	Yes	No
<div>AIR TRANSPORTATION (GREATER THAN 500 MILES)</div> <p>Travel arrangements greater than 500 miles from the manufacturing facility shall be via commercial airline transportation.</p> <p>The Madison Hose Company maintains the right to inspect the apparatus, within normal business hours, at any other point during construction. Expenses incurred during non-specified inspection visits shall be the responsibility of the Madison Hose Company.</p> <p>During inspection visits, the Madison Hose Company reserves the right to conduct actual performance tests to evaluate completed portions of the unit. Testing shall be accomplished with the assistance and resources of the contractor.</p> <div>DELIVERY DEMONSTRATION & POWERPOINT</div> <p>Upon delivery the manufacturer shall provide an experienced delivery engineer to demonstrate every device and feature built into the apparatus. A full day of demonstration shall be provided for each shift of firefighters as well as a final day of familiarization for the Madison Hose Company maintenance staff. The demonstration must include, as a minimum, an "AS BUILT" PowerPoint presentation of the specific unit as delivered to the Madison Hose Company. The PowerPoint program must cover each and every component and feature on the unit. A copy of the program must be provided to the Madison Hose Company for future use.</p> <p>Bidders shall include in their proposal the specific name of the individual designated to conduct the demonstration program along with a brief summary of the individual's qualifications. The individual must have conducted a minimum of 500 similar deliveries. Qualifications that do not meet these standards may be cause for rejection of the bid.</p> <p>Timing of the delivery demonstrations shall include both week days and weekends as may suit the needs of the Madison Hose Company.</p> <div>INSTRUCTION MANUALS/DRAWINGS, SCHEMATIC</div> <p>In accordance with standard commercial practices, applicable to each vehicle (including body and special equipment) furnished under the contract, the following listed manuals and schematics, in the quantity specified, shall be provided at time of delivery of each vehicle.</p> <p>The contractor shall supply at time of delivery, two (2) CD copies of a complete operation and service manual covering the complete apparatus as delivered and accepted.</p> <p>The manual shall contain the following:</p> <ul style="list-style-type: none"> • Descriptions, specifications, and ratings of chassis, pump (if applicable), and aerial device. • Wiring diagrams. • Lubrication charts. • Operating instructions for the chassis, any major components such as a pump and any auxiliary systems. • Instructions regarding the frequency and procedures recommended for maintenance. • Parts replacement information. <div>VEHICLE FLUIDS PLATE</div> <p>As required by NFPA-1901, the contractor shall affix a permanent plate in the driver's compartment specifying the quantity and type of the following fluids used in the vehicle:</p> <p>A permanent plate in the driving compartment shall specify the quantity and type of the following fluids used in the vehicle:</p>		
<div>MADISON HOSE COMPANY # 1</div>		

<div> <div>SPECIFICATIONS FOR ONE (1) 1500 GPM CUSTOM PUMPER</div> </div>	Bidder Complies	
	Yes	No
<div> <ul style="list-style-type: none"> Engine oil Engine coolant Chassis transmission fluid Pump transmission lubrication fluid Pump primer fluid Drive axle(s) lubrication fluid Air-conditioning refrigerant Air-conditioning lubrication oil Power steering fluid Cab tilt mechanism Transfer case fluid Equipment rack fluid Air compressor system lubricant Generator system lubricant </div> <div> <p><u>PRINCIPAL APPARATUS DIMENSIONS & G.V.W.R.</u></p> <p>The bidder shall include the principal dimensions, front G.A.W.R., rear G.A.W.R., and total G.V.W.R. of the proposed apparatus. Additionally, the bidder shall provide a weight distribution of the fully loaded, completed vehicle; this shall include a filled water tank, specified hose load, miscellaneous equipment allowance in accordance with NFPA-1901 requirements, and an equivalent personnel load of 250 lbs. per seating position.</p> <p><u>BIDDER TO SUPPLY AND FILL- IN PROPOSED DIMENSIONS:</u></p> <ul style="list-style-type: none"> OVERALL LENGTH: Not to exceed 360" OVERALL WIDTH: Not to exceed 100" OVERALL HEIGHT: Not to exceed 116" WHEELBASE: Not to exceed 179" <p>The axle and total weight ratings of the completed apparatus shall not be less than the following minimum acceptable weight ratings:</p> <ul style="list-style-type: none"> MINIMUM FRONT G.A.W.R.: 21500 lbs. MINIMUM REAR G.A.W.R.: 27000 lbs. MINIMUM TOTAL G.V.W.R.: 48500 lbs. <p><u>PRE-DELIVERY SERVICE</u></p> <p>After transportation from the factory and immediately prior to delivery to the Madison Hose Company, the apparatus shall receive a pre-delivery service consisting of: engine oil & filter change, chassis lubrication, fuel filter(s) changed, adjustment of engine to manufacturers specifications, complete inspection including all electrical and mechanical devices, for proper operation and correction of leaks or obvious problems.</p> <p><u>CONTINGENCY FUND</u></p> <p>An allowance of \$5,000.00 is included in the proposal price to be used by the Madison Hose Company for additional options or equipment. In the event this fund is not utilized completely, the remaining funds shall be credited back to the Madison Hose Company.</p> </div>		
<div>MADISON HOSE COMPANY # 1</div>		

<div> <div>SPECIFICATIONS FOR ONE (1) 1500 GPM CUSTOM PUMPER</div> </div>	Bidder Complies	
	Yes	No
<div> <div><u>BIDDERS BACKGROUND</u></div> <div> <p>All bidders shall state the ownership of the organization which shall actually construct the apparatus. Companies which are a division, subsidiary, wholly or partially owned subsidiary or other entity which is wholly or partially owned or controlled by another entity shall state their entire ownership lineage. Bidders from such organizations must have the bid signed by the chief executive of the parent entity.</p> </div> <div><u>UNIT BUILT AT HEADQUARTERS</u></div> <div> <p>In order to insure top quality construction, maximum assembly line and engineering communication and the highest level of manufacturing supervision the entire apparatus shall be built at the bidders' primary (headquarters) manufacturing facility. Apparatus constructed at satellite plants will not be considered.</p> </div> <div><u>REQUIRED PROPOSAL BLUEPRINT</u></div> <div> <p>A scale drawing of the specific apparatus being proposed shall be submitted WITH THE BID. Drawings of similar units or demo units shall not be permitted. Bidders should be clear that this provision is requiring a SCALE drawing of the truck which is actually being bid. The drawing shall be done at the manufacturer's facility by the manufacturer's engineering department in order to guarantee the accuracy of the drawing. Failure to comply with this requirement shall be grounds for rejection of the bid!</p> </div> <div><u>BODY CONSTRUCTION LIMITATIONS</u></div> <div> <p>Apparatus bodies which are either bolted together or make excessive use of adhesives shall not be considered. Similarly, body construction techniques which rely upon space consuming extrusions for structural support shall not be permitted.</p> </div> <div><u>FAMA COMPLIANCE</u></div> <div> <p>The apparatus manufacturer and local dealer must be current members of the Fire Apparatus Manufacturer's Association (FAMA).</p> </div> <div><u>MANUFACTURED IN THE UNITED STATES</u></div> <div> <p>The entire apparatus shall be assembled within the borders of the Continental United States to insure more readily available parts (without added costs and delays caused by tariffs and customs) and service.</p> </div> <div><u>QUALITY MANAGEMENT</u></div> <div> <p>The manufacturer shall operate a Quality Management System that is certified to ISO 9001 by an organization that is accredited by the ANSI-ASQ National Accreditation Board (ANAB). This type of business management system shall allow the manufacturer to monitor processes to ensure they are effective; keep adequate records; check output for defects, with appropriate and corrective action where necessary; regularly review individual processes and the quality system itself for effectiveness; and facilitate continual improvement.</p> <p>A copy of the registration certificate must be included in the proposal, NO EXCEPTIONS.</p> </div> <div><u>TABLE OF CONTENTS</u></div> <div> <p>As all manufacturers present their specifications in a different order, each manufacturer shall provide a table of contents for ease of bid comparison and to clearly locate all proposed items.</p> </div> </div>		
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SPECIFICATIONS FOR ONE (1) 1500 GPM CUSTOM PUMPER

Bidder
Complies

Yes No

NFPA TREAD PLATE CERTIFICATION

All stepping, standing, and walking surfaces on the body shall meet NFPA #1901 anti-slip standards. Aluminum tread plate utilized for stepping, standing, and walking surfaces shall be Alcoa No-Slip type. This material shall be a minimum 3/16 (0.1875") in thickness. Upon request by the Madison Hose Company, the manufacturer shall supply proof of compliance with this requirement. All vertical surfaces on the body, which incorporate aluminum tread plate material, will utilize the same material pattern to provide a consistent overall appearance.

MAXIMUM OVERALL HEIGHT RESTRCITION

Due to overall height limitations, the maximum overall height of the vehicle shall be documented as 116-inches (9-feet 8-inches), Must fit in Apparatus bay. NO EXCEPTIONS!

SERVICE ABILITY FORM

Service Center Location:

Distance in miles (one way) from Local Service Center Location to the Madison Hose Company's Location is: _____ miles.

Please answer the following questions:

Is this shop an authorized warranty center for the apparatus builder?

Is the Service Center enclosed and heated?

Number of full time Service Center Employees: _____

Number of Fire Pump Manufacturers Certified Employees: _____

Is your shop equipped to handle the following repair work:

Cab & Chassis Repairs:

Body Repairs:

Major Paint Work:

Water Tank Repairs:

Major Pump Repairs:

General Welding:

Frame & Spring Repairs:

Power Train Repairs:

This form was completed and submitted by:

(Please print or type full name)

Title of Individual: _____

Signature of individual: _____

SUBSCRIBED AND SWORN before me

Notary's Stamp

This ____ day of _____ 2015

Notary Public: _____

Commission Expires: _____

<div> <div>SPECIFICATIONS FOR ONE (1) 1500 GPM CUSTOM PUMPER</div> <div>Bidder Complies</div> </div>		
	Yes	No
<div> <div>AMP DRAW REPORT</div> <div> <p>The bidder shall provide with their bid proposal and at the time of delivery, an itemized print out of the expected amp draw of the entire vehicle's electrical system.</p> <p>A written load analysis, which shall include the following:</p> <ul style="list-style-type: none"> • The rating of the alternator. • The minimum continuous load of each component that is specified per: Applicable NFPA-1901. • Additional loads that, when added to the minimum continuous load, determine the total connected load. • Each individual intermittent load. <p>All of the above listed items shall be provided by the bidder per the applicable NFPA-1901.</p> </div> <div> <div>COOPERATIVE PURCHASING</div> <div> <p>The Manufacturer shall be pleased to allow other public agencies to use the purchase agreement resulting from this invitation to bid unless the bidder expressly notes on the proposal form that prices are not available for tag-on. The condition of such use by other agencies shall be that any such agency must make and pursue contact, purchase order/contract, and all contractual remedies with the successful bidder. Such tag-ons shall be done so that the Madison Hose Company has no responsibility for performance by either the manufacturer or the agency using the contract.</p> </div> <div> <div>UNDERWRITERS LABORATORIES INC. (UL) EXAMINATION AND TEST PROPOSAL</div> <div> <p>If required by the specific chapters of NFPA-1901, the proposed unit shall be tested and certified by Underwriters Laboratories Inc. (UL) Underwriters Laboratories Inc. (UL) is recognized worldwide as a leading third party product safety certification organization for over 100 years. UL has served on National Fire Protection Association (NFPA) technical committees for over thirty years.</p> </div> <div> <div>"PUMPER FIRE APPARATUS" NFPA 2009 CHAPTERS OF COMPLIANCE</div> <div> <div>GENERAL APPARATUS DESCRIPTION "PUMPER"</div> <div> <p>The unit shall be designed to conform fully to the "Pumper Fire Apparatus" requirements as stated in the NFPA 1901 Standard (2009 Revision), which shall include the following required chapters as stated in this revision:</p> <ul style="list-style-type: none"> • Chapter 1 Administration • Chapter 2 Referenced Publications • Chapter 3 Definitions • Chapter 4 General Requirements • Chapter 5 Pumper Fire Apparatus • Chapter 12 Chassis and Vehicle Components • Chapter 13 Low Voltage Electrical Systems and Warning Devices • Chapter 14 Driving and Crew Areas • Chapter 15 Body, Compartments and Equipment Mounting • Chapter 16 Fire Pumps and Associated Equipment • Chapter 18 Water Tanks </div> <div> <div>VEHICLE DATA PLATE DESCRIPTION CAB SAFETY SIGNS</div> <div> <p>The following safety signs shall be provided in the cab:</p> <ul style="list-style-type: none"> • A label displaying the maximum number of personnel the vehicle is designed to carry shall be visible to the driver. </div> </div> </div> </div> </div></div></div>		
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<div> <div>SPECIFICATIONS FOR ONE (1) 1500 GPM CUSTOM PUMPER</div> <div>Bidder Complies</div> </div>		
	Yes	No
<div> <ul style="list-style-type: none"> “Occupants will be seated and belted when apparatus is in motion” signs shall be visible from each seat. “Do Not Move Apparatus When Light Is On” sign adjacent to the warning light indicating a hazard if the apparatus is moved (as described in subsequent section). A label displaying the height, length, and GVWR of the vehicle shall be visible to driver. This label shall indicate that the Madison Hose Company will revise the dimension if vehicle height changes while vehicle is in service. <div> <div>CHASSIS DATA LABELS</div> <div> <p>The following information shall be on labels affixed to the vehicle:</p> <p>Fluid Data</p> <ul style="list-style-type: none"> Engine Oil Engine Coolant Chassis Transmission Fluid Pump Transmission Lubrication Fluid Pump Primer Fluid Drive Axle(s) Lubrication Fluid Air Conditioning Refrigerant Air Conditioning Lubrication Oil Power Steering Fluid Cab Tilt Mechanism Fluid Air Compressor System Lubricant Generator System Lubricant Front Tire Cold Pressure Rear Tire Cold Pressure Maximum Tire Speed Rating <p>Chassis Data</p> <ul style="list-style-type: none"> Chassis Manufacturer Production Number Year Built Month Manufactured Vehicle Identification Number <p>Manufacturers weight certification:</p> <ul style="list-style-type: none"> Gross Vehicle (or Combination) Weight Rating (GVWR or GCWR) Gross Axle Weight Rating, Front Gross Axle Weight Rating, Rear <div> <div>ROLLOVER STABILITY</div> <div> <p>The apparatus shall meet the criteria defined in 4.13.1 for rollover stability as defined in the 2009 NFPA Standard for Automotive Fire Apparatus.</p> </div> </div> <div> <div>REGIONAL SERVICE CENTER</div> <div> <p>The apparatus manufacturer shall maintain a comprehensive service center within 125 miles of the Madison Hose Company. This center shall be totally dedicated to the service of fire apparatus and fire apparatus only. It shall be fully authorized by the manufacturer to conduct all levels of repair and service. The capabilities of the service center shall be at a minimum:</p> <p>Authorized pump service for both Hale and Waterous</p> <p>Full hydraulic service</p> </div> </div> </div> </div> </div>		
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<div> <div>SPECIFICATIONS FOR ONE (1) 1500 GPM CUSTOM PUMPER</div> </div>	Bidder Complies	
	Yes	No
<div> <div> <div>Full 12 volt electrical service to include multiplexed systems</div> <div>Full 120/240 volt service</div> <div>Full chassis and running gear service</div> <div>Complete body shop and paint facility which shall include:</div> <div>Heated and humidity controlled 50 foot environmentally certified down draft paint booth</div> <div>Full time body shop and paint staff</div> <div>Electronic paint color mixing and matching system</div> <div>Secured paint storage area</div> <div>Apparatus service lift system</div> <div>Metal fabrication center which shall include at a minimum:</div> <div>10 x 12 shear</div> <div>Press Brake</div> <div>Apron Brake</div> <div>Modern MIG and TIG welding equipment</div> <div>Plasma cutter</div> <div>Machining center</div> </div> <div> <div>The service facility shall have sufficient indoor heated space to permit the storage of the Madison Hose Company's apparatus inside whenever in the center's possession. No outside storage will be permitted. The center must provide a full time staff of experienced EVT technicians with all of the required equipment to provide modern, accurate and efficient service. Bidders shall state the size of their shop and officer area in square feet. They shall state the location of the facility and provide photos of both the exterior and interior of the center. Accuracy of the description of the service center is of great importance.</div> <div> <div>SEAT BELT ANCHOR TESTING</div> <div>Each seat belt anchor shall be tested to withstand 3,000lbs of pull on both the lap and shoulder belt in accordance with FMVSS 210 section 4.2.</div> <div>SEAT MOUNTING TESTING</div> <div>Each seat mounting position shall be tested to withstand 20G's of force in accordance with FMVSS 207 section 4.2(c).</div> <div>Both tests shall be performed and verified at a third party testing and evaluation center.</div> <div>CUSTOM BUILT FULL TILT CAB TYPE</div> <div> <div> <div>FULL TILT</div> <div>CONTOUR WINDSHIELD</div> </div> <div> <div>The cab shall be a custom tilt style, built specifically for fire service. The cab shall be a cab over engine design, with integral tilt mechanism and engine access from inside the cab.</div> <div>Cab shall be designed, fabricated, assembled in its entirety, and installed on the frame rails in the manufacturer's factory. This requirement will eliminate any split responsibility in warranty and service.</div> </div> <div>OPEN SPACE DESIGN</div> <div>The cab interior shall be the "Open-Space" design with no wall, window or vertical support posts between the front and rear crew areas to allow direct communication, better visibility and air circulation in the cab.</div> </div> </div> </div></div>		
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<div> <div>SPECIFICATIONS FOR ONE (1) 1500 GPM CUSTOM PUMPER</div> </div>	Bidder Complies	
	Yes	No
<div> <div>CAB MATERIAL - ALUMINUM</div> <p>The cab shall be fabricated from 5052-H 32 aluminum alloy, utilizing the minimum material thickness as follows:</p> <ul style="list-style-type: none"> Cab side panels0.125 thick (1/8") Cab roof0.125 thick (1/8") Forward cab front sheet0.125 thick (1/8") Interior cab panels0.125 thick (1/8") Other panels0.125 thick (1/8") Cab doors0.1875 thick (3/16") Engine enclosure side panels0.250 thick (1/4") <div>CAB - BASE CONSTRUCTION</div> <p>Cab sub-frame shall be a welded assembly fabricated of 6063 structural aluminum alloy. This frame shall extend the full length and width of the cab and be secured to the chassis frame through two (2) rear urethane self centering load cushions, two (2) forward pivot brackets, and two (2) cab locks. The cab shall be of entirely welded construction.</p> <p>The front cab wall shall be of double wall type construction, featuring an inner and outer panel. NO EXCEPTIONS</p> <div>CRASH TESTING CERTIFICATION</div> <p>To ensure the safety of the cab occupants and cab integrity, proof of third party testing shall be provided. The cab shall be certified for SAEJ2422 side impact, SAEJ2420 with ECER29 cab front impact, and ECER29 cab roof strength.</p> <p>Furthermore, proof of testing and certification shall be provided that the cab, in accordance to SAE J2420 was front impact tested at 2.1 times the standard energy required in SAE J2420, thus exceeding the NFPA requirement.</p> <p>This test shall be performed with no support immediately behind the cab, thus providing an authentic test result.</p> <div>ROOF AND SIDE LOAD TESTING</div> <p>The cab design will include additional third party testing to ensure the safety of the cab occupants and cab integrity, proof of third party testing shall be provided. The cab shall be certified for SAEJ2422 side impact, SAEJ2420 with ECER29 cab front impact, and ECER29 cab roof strength.</p> <p>The manufacturer shall provide proof that third party testing has been conducted to prove a static roof and a static side-load test has been completed. In these tests, a 120,000 pound static load was first applied to the roof. This test was followed by applying the same 120,000 pound static load to the side of the cab.</p> <p>These tests will be conducted per the SAE J2422, Cab Roof Strength Evaluation, protocol and the ECE R29, Uniform provisions concerning the approval of vehicles with regard to the protection of occupants of the cab of a commercial vehicle, protocol.</p> <p>During both tests, the cab will withstand these loads without encroachment into the occupant survivable space and all doors remained closed during the test. The tests will be documented with photographs and real-time video in a report provided to the manufacturer.</p> </div> <div></div> <div></div>		
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SPECIFICATIONS FOR ONE (1) 1500 GPM CUSTOM PUMPER		Bidder Complies	
		Yes	No
<u>DIMENSIONS - EXTENDED LONG FOUR DOOR STYLE CAB</u>			
Minimum Cab Dimensions:			
<ul style="list-style-type: none"> Overall width 		100"	
<ul style="list-style-type: none"> Inside width across ceiling 		92"	
<ul style="list-style-type: none"> Front area floor to ceiling 		63"	
<ul style="list-style-type: none"> Top of front seat to ceiling 		44"	
<ul style="list-style-type: none"> Seat back to steering wheel 		22"	
<ul style="list-style-type: none"> Inside width (door to engine enclosure) 		24" (driver's side, at floor)	
<ul style="list-style-type: none"> Inside width (door to engine enclosure) 		20-1/2" (officer's side, at floor)	
<ul style="list-style-type: none"> Crew seat area width 		92"	
<ul style="list-style-type: none"> Outer crew seat risers to rear wall 		64-1/2"	
<ul style="list-style-type: none"> Centerline axle to rear wall 		82-1/2"	
<ul style="list-style-type: none"> Floor to top of engine enclosure 		30"	
<ul style="list-style-type: none"> Centerline axle to front of cab 		74"	
Glass Area Dimensions:			
<ul style="list-style-type: none"> Windshield (Contour) 		3,422 sq. in.	
<ul style="list-style-type: none"> Front door window, retractable 		743 sq. in. each	
<ul style="list-style-type: none"> Rear door window, retractable 		875 sq. in. each	
<ul style="list-style-type: none"> Side fixed crew windows 		620 sq. in. each	
Cab Entry Door Width Dimensions			
<ul style="list-style-type: none"> Forward door opening 		40" wide	
<ul style="list-style-type: none"> Rear door opening 		37" wide	
Cab Entry Step Dimensions			
<ul style="list-style-type: none"> Forward door recessed step 		32" wide x 9" deep	
<ul style="list-style-type: none"> Rear door recessed step 		32" wide x 9" deep	
Cab Entry Door Height Dimensions			
<ul style="list-style-type: none"> Forward door opening 		76-1/4" high	
<ul style="list-style-type: none"> Rear door opening 		85-1/4" high	
<u>TRANSVERSE EXTERIOR CAB COMPARTMENTS</u>			
<p>Two (2) compartments shall be provided, to the rear of the crew cab doors above the crosslays. The compartments shall be approximately 36" high, 10" wide and transverse above the crosslays. The transverse section shall be approximately 10" wide x 30" high. The transverse portion will be designed to fit a stokes basket. The transverse section shall be designed to be capable of being utilized for a seat riser rear wall.</p>			
<p>The exposed section of the compartment in the rear crew area shall be painted with Line-X to match the cab interior. The interior of the compartment shall be painted to match the color or material provided in the body compartments.</p>			
<p>Compartment door shall have a 3/16" aluminum exterior skin door with a one (1) inch box pan and a stainless steel "D" ring handle. Door shall be hinged on the forward edge with a stainless steel vertical piano hinge so it opens toward the rear cab door. The door shall be held in the open position by a gas shock stay arm.</p>			
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<div> <div>SPECIFICATIONS FOR ONE (1) 1500 GPM CUSTOM PUMPER</div> </div>	Bidder Complies	
	Yes	No
<p>Each exterior compartment shall contain a AMDOR LED strip light at each exterior door post and two (2) additional strip lights mounted in the transverse ceiling under the stokes basket area above the interior access doors. All lights will be wired to their respective door switch.</p> <p><u>CAB ROOF</u></p> <p>The roof will be of a split level design with radius edges for an aesthetic, streamline appearance. The roof shall be constructed the same material as the main structure and shall be internally reinforced using framing which shall span the entire width and length of the cab for maximum structural integrity. This shall allow the roof to support personnel and roof mounted equipment without the need for additional reinforcement.</p> <p>The cab roof over the rear crew area shall be raised ten (10) inches higher than the front driver and officer area. The front face of the raised roof section shall be sloped at a 45 degree angle, creating a streamlined interface with the standard, lower, forward roof section. This design shall allow for additional interior height in the rear crew area.</p> <p>The rear crew area doors shall be "Vista-Style", extending full height to the radius edge of the raised roof.</p> <p>Approximate dimensions:</p> <ul style="list-style-type: none"> Crew area floor to ceiling 64" Top of crew seat to ceiling 46" <p><u>ALUMINUM TREAD PLATE OVERLAY ON CAB ROOF</u></p> <p>A bright finish aluminum tread plate overlay shall be placed on the cab roof, starting at a point rearward of the light bar location and extending back to the end of the cab roof. This tread plate overlay shall be sealed with caulking around the edges to prevent moisture from entering the area between the cab roof and the overlay.</p> <p><u>CAB ROOF DRIP RAIL</u></p> <p>For enhanced protection from inclement weather, an integral drip rail shall be furnished on each side of the cab roof. The drip rail shall extend the full length of the cab roof.</p> <p><u>BARRIER HEIGHT CAB DOORS</u></p> <p>Four (4) side-opening doors shall be provided. The cab doors shall be shortened to the floorboard level, thus leaving an exposed step well area at each cab entrance. The cab doors shall be totally aluminum construction with an extruded aluminum frame and an aluminum outer door skin.</p> <p>The forward cab door opening shall be a minimum of 40" wide, and the rear cab door opening shall be a minimum of 37" wide. The rearward cab doors shall have a radius cutout allowing the door opening to protrude forward over the cab wheel well, while providing full access to the rear crew area.</p> <p>There shall be a heavy duty piano type stainless steel hinge on each door of a minimum pin diameter of 5/16". Hinges shall be slotted for ease of horizontal and vertical adjustment. There shall be a cab door seal and the doors shall close flush with the side of the cab. A heavy-duty 2 1/2" wide reinforced rubber strap shall be utilized to prevent the cab doors from opening greater than 90 degrees.</p> <p><u>CAST OPEN GRATE STEPS</u></p> <p>The front entrance steps shall be a minimum of 9" deep. Each step shall be a cast aluminum, open grate style step fabricated by Cast Products Inc. with a polished aluminum outer surface. The cab step risers shall be overlaid with .063" polished aluminum tread plate.</p>		
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<div> <div>SPECIFICATIONS FOR ONE (1) 1500 GPM CUSTOM PUMPER</div> </div>	Bidder Complies	
	Yes	No
<p>The rear entrance steps shall be a minimum of 9" deep. Each step shall be a cast aluminum, open grate style step fabricated by Cast Products Inc. with a polished aluminum outer surface. The cab step risers shall be overlaid with .063" polished aluminum tread plate.</p> <p><u>DOOR LATCHES</u></p> <p>A semi-recessed chrome plated pull handle, capable of operating with a gloved hand, shall be provided on the exterior of each cab door. Heavy-duty, bright finish cast paddle latches shall be provided on the interior of each cab door. Door latch mechanisms which utilize spring steel clamps shall not be considered due to their tendency to both rust and break. The interior door latch cables are to be designed to reduce adjustment or possible wear at the adjustment turnbuckles.</p> <p><u>ELECTRIC WINDOWS</u></p> <p>Each side cab door shall have a tinted retractable window. The window track shall be designed into the door frame extrusion, which shall be extruded with a track groove to house a window track and seal. The window shall be capable of being removed from an access slot designed in the bottom of the door frame. All side cab doors shall be equipped with electrically operated windows. The driver shall have a control to operate the officer's side window and the rear cab windows, on the inside door panel within easy reach. The officer side window control shall be on the inside door panel within easy reach.</p> <p><u>DOOR WINDOW TRIM</u></p> <p>Each side cab door window shall be designed with a custom extruded trim plate, which shall conform to the perimeter of the window opening in each door. The trim plate shall extend from the edge of the door skin to the window and shall have a silver anodized finish.</p> <p><u>INNER DOOR PANELS</u></p> <p>The cab door interior panels shall be covered with a one piece, brushed stainless steel panel, full height. The panel shall be 16 gauge stainless steel with a brushed finish and shall be designed to allow easy access to the inner door.</p> <p><u>"STOP" SIGN DECAL ON INTERIOR OF DOOR PANEL 4-DOORS</u></p> <p>Each interior cab door panel shall be equipped with a "STOP" sign type decal. The decals shall be made from Scotchlite material and shall cover at least 96 in². The decal shall be octagonal and shall be 10" in size.</p> <p><u>CAB SCUFF PANEL</u></p> <p>A polished stainless steel scuff plate shall be installed on the rear cab corners. The scuff plate shall extend the full height of the cab rear corner panel.</p> <p><u>TRANSVERSE CAB NOTCH</u></p> <p>The extended portion of the cab shall have a full width notch in the lower section for the speedlays and pump discharge/suction connections. This notch shall form the base of the seating area for the forward facing positions in the rear of the cab.</p> <p><u>WINDSHIELD/GLASS</u></p> <p>A two piece, symmetrical, safety glass windshield shall be provided on the cab for the driver and officer providing a clear viewing area. The windshields shall be full width to the center of the front cab support for each side and provide the occupants with a panoramic view. To provide enhanced peripheral vision on each side of the cab, the windshield and cab structure shall be designed with</p>		
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<div> <div>SPECIFICATIONS FOR ONE (1) 1500 GPM CUSTOM PUMPER</div> </div>	Bidder Complies	
	Yes	No
<p>radius corners, which provide a minimum of 8" of glass area, measured from the glass face to the side edge near the door post. The windshield shall consist of three (3) layers; the outer light, the middle safety laminate and the inner light. The thick outer light layer shall provide superior chip resistance, the middle safety laminate layer shall prevent the windshield glass pieces from detaching in the event of breakage and the inner light shall provide yet another chip resistant layer.</p> <p>The windshield will be a contour design with approximately 3400 sq. in. of area for improved visibility and style. The windshield glass shall be designed so it can be used on either the driver or officer side. Single piece windshields that utilize epoxy or that are bonded to the cab structure shall not be acceptable.</p> <p><u>WINDSHIELD WIPERS AND WASHER</u></p> <p>Dual, electric operated, pantographic type windshield wipers shall be provided. One (1) electric drive motor shall be provided for each wiper.</p> <p>Wipers shall have "HI/LO" and "INTERMITTENT" operating speeds. "HI/LO" speeds shall be controlled by a steering column control, within the turn signal control stem. "INTERMITTENT" operation shall be controlled by a twist switch within the control on the steering column. The wipers shall be of the self-parking type.</p> <p>Windshield washers shall be electric operated wet-arm type with a 3/4 gallon washer fluid reservoir, mounted inside the engine enclosure and readily accessible through the engine hatch at the rear of the engine enclosure. The washer control shall be integral with the intermittent wiper control switch.</p> <p>There shall be individual removable panels on the front face of the cab for access to the wiper motor assemblies.</p> <p><u>WINDSHIELD WIPER DURABILITY CERTIFICATION</u></p> <p>Windshield wipers shall survive testing in excess of 3 million cycles in accordance with section 6.2 of SAE J198 "Windshield Wiper Systems – Trucks, Buses and Multipurpose Vehicles". The bidder shall certify that the wiper system design has been "Third party tested" and that the wiper system has met this criteria.</p> <p><u>DARK TINTED REAR WINDOW GLASS</u></p> <p>The windshield and the forward cab door glass shall be provided with standard DOT green automotive tint. The side cab windows to the rear of the front doors, the rear cab door windows and any rear viewing windows shall be equipped with a dark automotive tint.</p> <p><u>ILLUMINATED GRAB HANDLES WITH REFLECTIVE STRIPS</u></p> <p>Four (4) Hansen 1-1/4" diameter x 28" long, knurled, bright anodized aluminum handrails shall be provided, one (1) at each cab door entrance. Each grab rail shall have white LED lights that shall be wired to the DOT marker lights and interlocked to illuminate when the parking brake is applied. In addition to the LED lights, each handrail shall have two (2) red diamond grade reflective strips for enhanced visibility. Grab rail stanchions shall be chrome plated and offset when necessary to prevent "hand-pinching" when opening or closing the doors. Formed rubber gaskets shall be provided between each stanchion base and the cab surface.</p> <p><u>INTERIOR GRAB RAILS</u></p> <p>Grab rails shall be provided to assist in entry and exiting of the cab. Each grab rail shall be a cast aluminum "D" style handle that shall have a black powder coat finish and shall be located in the following locations:</p>		
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<div> <div>SPECIFICATIONS FOR ONE (1) 1500 GPM CUSTOM PUMPER</div> <div>Bidder Complies</div> </div>		
	Yes	No
<ul style="list-style-type: none"> Three (3) 12" long, vertically mounted, one (1) on the officer's side of the cab interior "A" post and one (1) on each side of the cab interior on the "C" post in the crew area One (1) 11" long, horizontally mounted, on each front cab door on the interior door panel One (1) 11" long, horizontally mounted, on each rear cab door on the interior door panel One (1) 30" long, horizontally mounted, on each rear cab door, located approximately 8" above the bottom of the window opening. <p><u>FRONT CAB GRILL</u></p> <p>A shaped polished stainless steel grille shall be installed to allow for maximum air flow to the charge air cooler and the radiator.</p> <p><u>AIR INTAKE/OUTLET</u></p> <p>Two (2) shaped, polished stainless steel air inlets/outlets shall be provided horizontally above the wheel well opening, one on each side of the cab. The grilles shall be equipped with a mesh screen to serve as a secondary ember separator. The design shall permit proper ducting of air through the engine compartment and cooling system.</p> <p><u>ENGINE AIR INTAKE SYSTEM</u></p> <p>The left side inlet, used for the air intake to the air cleaner, shall be equipped with dual ember separators for separating burning embers from the air intake system. This system shall be such that particles larger than .039 inches (1 mm) in diameter cannot reach the air filter element.</p> <p>No part of the air intake system for the engine shall be lower than the top of the frame rails to ensure the vehicle can navigate pooled water without any part of the air intake system being exposed to water when the vehicle is stopped or in motion. Chassis designs, which the engine air intake system is lower than the frame rails shall not be acceptable!</p> <p><u>CAB WHEEL WELL LINERS</u></p> <p>The front cab wheel wells shall be equipped with fully removable, bolt-in, aluminum inner wheel well liners. The liners shall extend full depth into the truck frame. The completely washable wheel well liners shall be designed to protect the cab substructure, inner panels, and other miscellaneous installed components from road salts, debris, dirt accumulation and corrosion.</p> <p><u>CAB FENDERETTES</u></p> <p>The cab wheel well openings shall be trimmed with replaceable, bolt-in, polished stainless steel fenderettes. The fenderettes shall be secured to the cab with stainless steel threaded fasteners along the internal perimeter of the wheel well. Dissimilar metal tape and black vinyl trim molding shall be used where the cab and fender meet.</p> <p><u>FRONT MUD FLAPS</u></p> <p>Heavy duty, black rubber type mud flaps shall be provided behind the front wheels.</p> <p><u>VELVAC WEST COAST MIRRORS WITH 2010 HEADS and 6" CONVEX</u></p> <p>Two (2) Velvac West Coast style 2010 mirrors shall be furnished, one 708211-4 and one 708212-4 on each front cab door. Each mirror will have a 16 x 8 flat glass head mounted in a polished 300 series stainless steel outer shell and a heavy duty ABS inner housing. Both heads will be</p>		
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<div> <div>SPECIFICATIONS FOR ONE (1) 1500 GPM CUSTOM PUMPER</div> </div>	Bidder Complies	
	Yes	No
<p>electrically heated. The mirror heads will be installed on a one piece stainless steel loop mounted to the forward portion of the door with two (2) brackets, forward of the windows.</p> <p>Two (2) 6" diameter stainless steel convex mirrors will also be furnished, one on each lower loop of the mounting bracket.</p> <p><u>VELVAC WEST COAST MIRROR INSTALLATION</u></p> <p>All parts for installation of the West Coast Mirrors shall be supplied. Both heads will be electrically heated, controlled by one (1) switch on the dash convenient to the driver. Both mirror heads will be controlled from the driver's seating position by one (1) four way switch that allows the driver to select either the officer side mirror or the driver side mirror.</p> <p><u>EXTENDING CONVEX MIRROR</u></p> <p>One (1) Velvac, 8" (minimum) convex mirror 714721 extending mirror shall be provided and installed right hand side of cab extending forward off of cab roof. Support brackets shall be made of stainless steel material.</p> <p><u>INTERIOR CAB TRIM</u></p> <p>The cab interior shall be constructed to create an ergonomically designed interior to be user friendly and functional for the driver and officer.</p> <p>The forward overhead panel shall be covered with a three (3) piece custom formed ABS vinyl overlay, which shall have integrated windshield defroster/heat vents and four (4) comfort vents.</p> <p>All ABS formed material panels, as well as all of the interior upholstery panels shall be medium gray in color. The upholstered cab overhead and side wall portions shall utilize gray Durawear upholstery with padding underneath to provide additional insulation.</p> <p><u>CUSTOM CAB INTERIOR PAINT - LIGHT GRAY LINE-X</u></p> <p>The interior metal surfaces of the cab shall be finish painted with light gray Line-X material.</p> <p><u>INTERIOR REAR WALL</u></p> <p>The interior rear wall of the cab shall be covered with gray Durawear for durability and shall match the other upholstered areas of the cab.</p> <p><u>BRUSHED SS KICK PLATE ON LOWER INTERIOR REAR WALL</u></p> <p>A twelve inch high brushed stainless steel scuff plate shall be provided from the floor level up on the rear interior cab wall.</p> <p><u>UNDER SEAT STORAGE COMPARTMENTS</u></p> <p>There shall be a compartment provided under each front seat. Each compartment shall have individual, painted compartment doors with latches to provide additional storage space in the cab and will be accessible from the front of the seat riser when the door is opened.</p> <p><u>S4 PRETENTIONER MOUNT IN SEAT COMPARTMENT</u></p> <p>Due the driver's seat being equipped with Rolltek and being an air ride seat, the S4 pretensioner for the seat will be mounted in the seat riser or compartment for the driver's seat.</p>		
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<div> <div>SPECIFICATIONS FOR ONE (1) 1500 GPM CUSTOM PUMPER</div> </div>	Bidder Complies	
	Yes	No
<div><u>BARYFOL FLOORING</u></div> <p>The floor of the driver's compartment and the floor of the crew area shall be lined with BARYFOL vinyl composite flooring to comply with NFPA noise and heat requirements.</p> <p>The material utilized for this application shall be certified to meet the NFPA 1901, 2009 revision for anti slip walking surfaces.</p> <div><u>CAB ACOUSTICAL INSULATION</u></div> <p>One (1) inch thick acoustical insulation shall be provided on the cab roof and rear and side walls of the cab. This material shall be fitted between the cab structural members and secured with adhesive to provide an insulation barrier for noise and heat.</p> <div><u>ENGINE ENCLOSURE</u></div> <p>The forward portion of the engine enclosure shall be covered with a custom formed ABS overlay that shall be coated with Line-X to match the balance of the cab interior. To allow maximum "elbow room" for the driver and officer, the forward portion of the engine enclosure shall feature a contour shape. The engine enclosure shall not significantly obstruct the driver's vision in any direction. The enclosure shall be an integral part of the cab structure, which shall be constructed from .250 5052-H32 aluminum, providing adequate strength to support radio, map boxes, etc. The engine enclosure shall be insulated to protect from heat and sound. The noise insulation shall keep the DBA level within the limits stated in the current NFPA series 1900 pamphlet.</p> <p>A, hinged access door shall be provided in the top rearward portion of the engine enclosure. The door shall allow access to the engine oil, transmission fluid, power steering fluid level dipsticks and the windshield washer fluid reservoir. The access door shall be provided with two (2) flush mounted latches and gas shock holders. There shall be an ABS cover that shall be coated with Line-X, over the access door to give a cleaner look to the top of the engine enclosure and doghouse area.</p> <div><u>ENGINE ENCLOSURE</u></div> <p>The engine enclosure shall be no more than 43" in length to provide additional leg room for the forward facing seating position.</p> <div><u>SUN VISORS</u></div> <p>To provide maximum protection for the driver and officer, two (2) padded vinyl sun visors shall be mounted in the cab overhead on each side.</p> <div><u>ADVANCED OCCUPANT RESTRAINT SYSTEM</u></div> <p>The cab shall be equipped with advanced occupant restraint systems. This system shall function in the event of a side roll over and shall be compatible with occupants ranging from a 5th percentile female to 95th percentile male.</p> <p>This system consists of a roll sensor, seat and occupant pretensioners; buckle pretensioners and inflatable side airbags. This system shall be functionally active while the truck is in operation.</p> <p>A hybrid or pyrotechnic inflator shall inflate the side airbags. The bag should remain inflated to the extent of providing head cushioning for 10 seconds after inflation. Pretensioners should be compatible with either ABTS or body mounted seats and seat belts. Buckle pretensioners shall be used on static or power seats where there is no air suspension. The buckle pretensioners must be capable of stroking 125 mm.</p>		
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<div> <div>SPECIFICATIONS FOR ONE (1) 1500 GPM CUSTOM PUMPER</div> </div>	Bidder Complies	
	Yes	No
<div> <div>ROLL SENSOR</div> <p>The roll sensor continually monitors the roll rate and angle of the vehicle, and deploys safety devices when a roll event occurs. Deployment determination is made by a combination of vehicle angle and angular rate. Vehicle deployment angle shall never exceed 60 degrees.</p> <p>The roll sensor performs self-diagnostics each time the vehicle is started. A dash-mounted light shall turn off after approximately 10 seconds if the sensor is functioning. During operation, the roll sensor monitors for proper connection to each safety device in the vehicle once per second. If improper connection is measured at any device or if an internal fault occurs, the roll sensor shall illuminate the dash-mounted light. The system shall continue to function in the event of non-critical faults. System diagnostics are on the SAE J1587 bus.</p> <div>DRIVERS SEAT</div> <p>The driver's seat shall be a H. O. Bostrom Sierra Air-50FX/HD/ABTS LH air suspension, high back bucket seat with Side Curtain Airbag.</p> <p>The Side Air Curtain shall be mounted integral to the outboard bolster of the seat back. The air curtain shall be covered by a decorative panel when in the stored position.</p> <p>A suspension seat safety system shall be included. When activated the system shall pretension the seat belt then retract the seat to its lowest travel position.</p> <p>The seat shall have a tapered and padded seat cushion with lumbar support. The seat shall have a five inch fore and aft adjustment, a three inch height adjustment with a fixed seat back. The seat air ride suspension shall be pneumatically controlled from a control switch on the forward lower edge of the seat.</p> <p>The seat shall be equipped with a red integrated 3-point shoulder harness with lap belt and an automatic retractor built into the seat assembly.</p> <div>OFFICERS SEAT</div> <p>The officer's seat shall be a H. O. Bostrom Tanker 450 ABTS RH series fixed base SCBA seat with Side Curtain Airbag.</p> <p>The Side Air Curtain shall be mounted integral to the outboard bolster of the seat back. The air curtain shall be covered by a decorative panel when in the stored position.</p> <p>A suspension seat safety system shall be included. When activated the system shall pretension the seat belt around the occupant to firmly hold them in place in the event of a collision.</p> <p>The seat shall have a tapered and padded seat cushion with lumbar support. The seat shall include a SCBA storage area with integral headrest.</p> <p>The seat shall be equipped with a red integrated 3-point shoulder harness with lap belt and an automatic retractor built into the seat assembly.</p> <p>The officer's seat shall include a H. O. BOSTROM Secure All™ SCBA Locking System. The bracket system shall be free of straps and clamps that may interfere with auxiliary equipment on SCBA units. The center guide fork shall keep the tank in-place for a safe and comfortable fit in seat cavity. Fire fighters shall simply push the SCBA unit against the pivot arm to engage the patented auto-locking system. Once the lock is engaged, the top clamp shall surround the top of the SCBA tank for a secure fit in all directions.</p> </div>		
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<div> <div>SPECIFICATIONS FOR ONE (1) 1500 GPM CUSTOM PUMPER</div> </div>	Bidder Complies	
	Yes	No
<p>The release handle shall be integrated into the seat cushion for quick and easy release and shall eliminate the need for straps or pull cords to interfere with other SCBA equipment.</p> <p><u>FORWARD FACING, OUTBOARD, DRIVER SIDE SEAT</u></p> <p>The driver's side outboard forward facing crew seat shall be an H. O. Bostrom Tanker 450 ABTS LH series fixed SCBA seat with Side Curtain Airbag.</p> <p>The Side Air Curtain shall be mounted integral to the outboard bolster of the seat back. The air curtain shall be covered by a decorative panel when in the stored position.</p> <p>A suspension seat safety system shall be included. When activated the system shall pretension the seat belt around the occupant to firmly hold them in place in the event of a collision.</p> <p>The seat shall have a tapered and padded seat cushion with lumbar support. The seat shall include an SCBA storage area with integral headrest.</p> <p>The seat shall be equipped with a red integrated 3-point shoulder harness with lap belt and an automatic retractor built into the seat assembly.</p> <p>The driver's side outboard forward facing crew seat shall have a flip-up style seat.</p> <p>The driver's side forward facing outboard seat shall include a H. O. BOSTROM Secure All™ SCBA Locking System. The bracket system shall be free of straps and clamps that may interfere with auxiliary equipment on SCBA units. The center guide fork shall keep the tank in-place for a safe and comfortable fit in seat cavity. Fire fighters shall simply push the SCBA unit against the pivot arm to engage the patented auto-locking system. Once the lock is engaged, the top clamp shall surround the top of the SCBA tank for a secure fit in all directions.</p> <p>The release handle shall be integrated into the seat cushion for quick and easy release and shall eliminate the need for straps or pull cords to interfere with other SCBA equipment.</p> <p><u>FORWARD FACING, OUTBOARD, OFFICER SIDE SEAT</u></p> <p>The officer's side outboard forward facing crew seat shall be an H. O. Bostrom Tanker 450 ABTS RH series fixed SCBA seat with Side Curtain Airbag.</p> <p>The Side Air Curtain shall be mounted integral to the outboard bolster of the seat back. The air curtain shall be covered by a decorative panel when in the stored position.</p> <p>A suspension seat safety system shall be included. When activated the system shall pretension the seat belt around the occupant to firmly hold them in place in the event of a collision</p> <p>The seat shall have a tapered and padded seat cushion with lumbar support. The seat shall include an SCBA storage area with integral headrest.</p> <p>The seat shall be equipped with a red integrated 3-point shoulder harness with lap belt and an automatic retractor built into the seat assembly.</p> <p>The officer's side outboard forward facing crew seat shall have a flip-up style seat.</p> <p>The officer's side forward facing outboard seat shall include a H. O. BOSTROM Secure All™ SCBA Locking System. The bracket system shall be free of straps and clamps that may interfere with auxiliary equipment on SCBA units. The center guide fork shall keep the tank in-place for a safe and comfortable fit in seat cavity. Fire fighters shall simply push the SCBA unit against the pivot arm to engage the patented auto-locking system. Once the lock is engaged, the top clamp shall surround the top of the SCBA tank for a secure fit in all directions.</p>		
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<div> <div>SPECIFICATIONS FOR ONE (1) 1500 GPM CUSTOM PUMPER</div> </div>	Bidder Complies	
	Yes	No
<p>The release handle shall be integrated into the seat cushion for quick and easy release and shall eliminate the need for straps or pull cords to interfere with other SCBA equipment.</p> <p><u>CENTER FORWARD FACING CREW SEATS</u></p> <p>Two (2) center inboard forward facing crew seats shall be provided. Each seat shall be an H. O. Bostrom Tanker 450 ABTS series fixed SCBA seat and shall have a tapered and padded seat cushion with lumbar support.</p> <p>Each seat shall include an SCBA storage area with integral headrest.</p> <p>Each seat shall be equipped with a red integrated 3-point shoulder harness with lap belt and an automatic retractor built into the seat assembly.</p> <p>The two (2) center inboard forward facing crew seats shall have a flip-up style seat.</p> <p>Each center forward facing seat shall include a H. O. BOSTROM Secure All™ SCBA Locking System. The bracket system shall be free of straps and clamps that may interfere with auxiliary equipment on SCBA units. The center guide fork shall keep the tank in-place for a safe and comfortable fit in seat cavity. Fire fighters shall simply push the SCBA unit against the pivot arm to engage the patented auto-locking system. Once the lock is engaged, the top clamp shall surround the top of the SCBA tank for a secure fit in all directions.</p> <p>The release handle shall be integrated into the seat cushion for quick and easy release and shall eliminate the need for straps or pull cords to interfere with other SCBA equipment.</p> <p><u>FORWARD FACING CREW SEAT RISER</u></p> <p>The forward facing seats shall be mounted on a full width aluminum riser that shall be welded into the cab during cab construction. The riser shall match the interior of the cab and shall have two (2) individual, painted aluminum compartment doors with latches, to provide additional storage space in the cab.</p> <p><u>SEAT UPHOLSTERY MATERIAL</u></p> <p>The seats shall be upholstered with heavy duty gray tweed Durawear material as provided by Bostrom.</p> <p><u>CUSTOM EMBROIDERED EMBLEM ON SEATS</u></p> <p>The seats shall be equipped with a custom embroidered logo matching the Madison Hose Company's requirements.</p> <p><u>SEAT BELT CUSHION SENSORS AND BELT SENSORS</u></p> <p>The apparatus shall be equipped with an Akron/Weldon seat belt warning system. The system shall consist of a Seat Belt module, dash mounted display and an audible alarm.</p> <p>Seat belt and seat cushion sensors shall be provided on the six (6) specified seating positions.</p> <p><u>CAB HELMET STORAGE</u></p> <p>Each seat position shall have a Bostrom: 8900-020 Helmet Locking System, meeting NFPA 1901, 2009 for a total of six (6) holders. The holder shall accommodate all helmet sizes.</p>		
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<div> <div>SPECIFICATIONS FOR ONE (1) 1500 GPM CUSTOM PUMPER</div> <div>Bidder Complies</div> <div>YesNo</div> </div>		
	Yes	No
<div> <div>VEHICLE DATA RECORDER</div> <div> <p>An Akron/Weldon Vehicle Data Recorder (VDR) system shall be provided. The system shall include an NFPA compliant "Black Box" with reporting software that shall be capable of data storage to coincide with the NFPA requirements.</p> <p>Data storage capabilities shall include interfaces with the following systems:</p> <ul style="list-style-type: none"> • Display module (Master Optical Warning Device) • VDR, date & time stamp • Max Vehicle speed (MPH) • Vehicle acceleration / deceleration (MPH/Sec.) • Engine Speed (RPM) • ABS event • Data password protected • Data sampled once per second, in 48-hour loop • Data sampled min by min for 100 engine hours • Throttle position (% of Throttle) • Data software • PC / Mac Compatible • Data summary reports </div> <div> <div>VEHICLE DATA RECORDER DOWNLOAD HARNESS</div> <div> <p>A Weldon model #0L40-2597-00 VDR download harness shall be supplied with the system to allow the data to be downloaded to a computer.</p> </div> <div> <div>EXTERNAL CAB STORAGE COMPARTMENT WITH HINGED DOOR + INTERNAL ACCESS DOOR</div> <div> <p>A storage compartment shall be mounted in the cab in lieu of the driver's side rearward facing crew seat. The compartment shall be approximately 23 7/8" deep x 41 3/4 " high x 22 3/4" wide. The door opening shall be approximately 35 7/8" high x 20" wide.</p> <p>The compartment shall be constructed of aluminum, painted with textured paint matching the interior color of the cab and shall be equipped with a hinged flush mount door and an internal access door, latched and painted. The exterior door shall be held in the open position by a gas shock stay arm.</p> <p>The interior of the compartments shall be finish painted with Multispec #7247 White Marble Stone scuff resistant paint to provide a protective application over all of the compartment interior surfaces.</p> <p>The EMS compartment shall be equipped with one (1) Amdor LED interior light. The lighting shall be wired to automatically activate when the compartment door is open and the master battery switch is in the "on" position.</p> </div> <div> <div>EXTERNAL CAB STORAGE COMPARTMENT WITH A HINGED DOOR + INTERNAL ACCESS DOOR</div> <div> <p>A storage compartment shall be mounted in the cab in lieu of the officer's side rearward facing crew seat. The compartment shall be approximately 23 7/8" deep x 41 3/4" high x 22 3/4" wide. The door opening shall be approximately 35 7/8" high x 20" wide.</p> <p>The compartment shall be constructed of aluminum, painted with textured paint matching the interior color of the cab and shall be equipped with a hinged flush mount door with a painted finish and an internal access door, latched and painted. The exterior door shall be held in the open position by a gas shock stay arm.</p> </div> </div> </div> </div></div>		
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<div> <div>SPECIFICATIONS FOR ONE (1) 1500 GPM CUSTOM PUMPER</div> </div>	Bidder Complies	
	Yes	No
<p>The interior of the compartments shall be finish painted with Multispec #7247 White Marble Stone scuff resistant paint to provide a protective application over all of the compartment interior surfaces.</p> <p>The EMS compartment shall be equipped with one (1) Amdor LED interior light. The lighting shall be wired to automatically activate when the compartment door is open and the master battery switch is in the "on" position.</p> <p><u>MAP BOOK STORAGE</u></p> <p>A map book compartment shall be provided for horizontal storage of three (3) 2" 3-ring binders, which shall be front loaded. The storage compartment shall be constructed from 1/8" aluminum which shall be painted with textured paint, matching the interior color of the cab.</p> <p><u>ANTENNA INSTALLATION</u></p> <p>Three (3) antenna mounting base model #MATM with 17' of coaxial cable shall be provided and installed on the lower cab roof, behind the light bar. The attached antenna wire shall be run to the right side cab dash area.</p> <p>The Madison Hose Company is responsible to have the correct antenna whip installed once the apparatus is delivered.</p> <p><u>CONDUIT FOR RADIO WIRING</u></p> <p>Two (2) sections of 3/4" ID flex conduit shall be provided from the area under the dash of the officer's side of cab to the pump operator's panel.</p> <p><u>INTERIOR CABINET - FULL WIDTH OF REAR WALL</u></p> <p>An interior access only storage cabinet shall be recessed above the transverse compartment, with access in the rear wall of the cab, near the ceiling. The cabinet shall be full width of the cab and shall be sized to optimize the depth and height, depending on the cab type and seating configuration. The cabinet shall be open with a netting cover to retain equipment when the apparatus is in motion. The cabinet construction shall be of 1/8" (.125") thickness smooth aluminum and finish painted to match the interior cab paint.</p> <p><u>DASH & CENTER CONSOLE</u></p> <p>The driver and officer side dash, along with the center dash, shall be covered with a custom formed ABS overlay that shall be coated with Line-X. The Line-X color shall match the interior color of the cab to create an ergonomically designed interior to be user friendly and functional for the driver and officer.</p> <p>The dash gauge panel shall be a custom formed ABS pewter gray wrap-around design for improved visibility. A full complement of gauges shall be provided in custom formed bezels. The starter and ignition switches shall also be integrated into the upper left portion of the gauge panel for easier access.</p> <p>All warning lights and indicators shall be located in either the gauge itself or in the warning light cluster located in the lower center portion of the dash. Each gauge shall be equipped with an international symbol that is easily recognizable, denoting the system being monitored. Instrumentation shall be backlit for easy identification.</p> <p>The transmission gear selector and the spring brake control valve shall be located on an angled section of the center dash assembly toward the driver for easy access.</p>		
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<div> <div>SPECIFICATIONS FOR ONE (1) 1500 GPM CUSTOM PUMPER</div> </div>	Bidder Complies	
	Yes	No
<p>There shall be provisions for mounting a switch panel in the center of the dash between the driver and officer. The top center of the dash assembly shall contain one (1) removable panel to access the main chassis wiring circuits and breaker panels.</p> <p><u>DRIVERS DASHBOARD PANEL</u></p> <p>The main instrument panel shall be centered in front of the driver and shall be mechanically fastened to the main dash assembly. The panel shall be made of custom formed ABS that shall contain the primary gauges, an instrument warning light cluster and the ignition and engine start switches.</p> <p>Each gauge shall have a raised glass lens with polished chrome trim ring and be backlit by integral blue LED's. Each gauge shall be designed with an integral red warning light with a pre-programmed warning point. Gauges monitoring drive-train component status shall be of the direct data bus type capable of displaying information broadcast on the J 1939 data-link. Each gauge warning indicator shall be capable of activating an audible alarm inside the dashboard.</p> <p>Additional auxiliary control switches and instruments shall be located within the center or overhead panel located near the driver's position.</p> <p>The primary gauges shall consist of:</p> <ul style="list-style-type: none"> • Vehicle speedometer (0-80 mph) • Engine tachometer (0-3000 rpm) • Engine oil pressure (0-100 psi); low oil pressure warning • Engine coolant temperature (100-250 °F); high engine temp warning (based on engine) • Transmission oil temperature (100-350 °F); high transmission fluid temp warning • Vehicle battery voltage (9-18 VDC); low voltage warning at 11.8 amps • Front air system gauge (0-150 psi); low air pressure warning at 65 psi • Rear air system gauge (0-150 psi); low air pressure warning at 65 psi • Fuel level (E-1/2-F); low fuel level warning @ 1/8 tank • Air cleaner restriction gauge (0 - 40), warning at 25" restriction. <p>Additional auxiliary control switches and instruments (if applicable) shall be located within the dash panel located near the driver's position.</p> <ul style="list-style-type: none"> • Diesel Exhaust Fluid level (E-1/2-F); low fuel level warning @ 1/8 tank • Engine Compression Brake Controls <p><u>INDICATOR CLUSTER</u></p> <p>The driver's dashboard panel shall consist of Ametek gauges, an 18 item instrument warning light cluster and a 16 item, dead front type alarm panel.</p> <p>This display shall contain the system control unit that collects data from the vehicle data bus (J1939), analog sensors, and switches throughout the vehicle. This data shall be presented using gauges, telltales and the two (2) display panels. The warning light display shall include a 2 x 20 dot matrix display, 18 telltales and 2 buttons to navigate through the screen menus.</p> <p>The LCD dot matrix display shall be a 2 line by 20-character display with each character being 7 dot by 5 dot configuration. FSTN technology shall be used on the display for wide viewing capability. The module shall be backlit with amber LED's. The unit shall also be supplied with a heater to ensure proper operation over the entire 40 to +85 deg. C.</p> <p>This display contains a series of two (2) screens to provide information about the vehicle. To control the display of that information, the screens are divided into two (2) menus; one that can be</p>		
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<div> <div>SPECIFICATIONS FOR ONE (1) 1500 GPM CUSTOM PUMPER</div> </div>	Bidder Complies	
	Yes	No
<p>displayed while the vehicle is in motion and one that can only be accessed when the parking brake is set.</p> <p>On the Road displays shall include:</p> <ul style="list-style-type: none"> Two (2) configurable displays that can show any of the parameters the unit collects. This includes odometer, trip information, fuel economy information; all gauge data, and virtually any other data available on the vehicle that the display has access to, either through the data bus or via analog inputs. Two (2) trip displays for miles and hours that are capable of being reset. Two (2) fuel data screens: shall be provided; one for fuel remaining until empty and one for fuel economy. The fuel economy display shall be capable of being reset so that average economy over a predetermined period can be displayed. <p>The displays that can be accessed when the parking brake is set shall include:</p> <ul style="list-style-type: none"> Engine hours as maintained by the engine ECU Service Alarm screens to report miles to next service or miles past required service. These screens shall allow the operator to choose the length of the service interval and shall have the ability to reset it. Message screens with warning messages the display has collected during the current ignition cycle. These screens shall be divided into configured warnings such as "Low Air Pressure" and the data bus faults reported by ECU's on the vehicle. Both lists shall allow the operator to review the last 12 events that occurred on the vehicle for maintenance and troubleshooting purposes. Diagnostic screens shall test the instrumentation system to verify it is working correctly. Setup screens shall be used to select either English or metric display. They shall also allow the operator to choose the data that shall be displayed by the configurable on-the-road screens. <p>The system shall be configured with user defined warning messages such as Low Air Pressure or High Coolant Temperature. When these events occur the warning message shall come up on the screen and can be accompanied by a buzzer. The messages shall be prioritized so the most important messages are always displayed. Whether the message can be dismissed by pressing a button shall be configurable. Messages that have been dismissed but are still active shall be retained in the message screens for review until the ignition is turned off. Listed below are the defined telltales and their indicators.</p> <ul style="list-style-type: none"> "Right And Left Directional" arrows (green in color) "Ignition ON" Indicator (amber in color) "Hi Beam" indicator (blue in color) "Battery ON" indicator (green in color) "Parking Brake ON" indicator (red in color) "Check Transmission" indicator (amber in color) "Cab Not Latched" indicator (red in color) "Stop Engine" indicator (red in color) "Check Engine" indicator (amber in color) "ABS Warning" indicator (red in color) "Low Coolant Level" (red in color) "Fuel Restriction" indicator (amber in color) "Water In Fuel" indicator (amber in color) "Fasten Seat Belts" indicator (red in color) "Fast Idle" Indicator (amber in color) "Do Not Move Truck" indicator (red in color) "DPF Regeneration" (amber in color) "Exhaust High Temperature" (amber in color) "Engine Diagnostic Fault" (amber in color) 		
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SPECIFICATIONS FOR ONE (1) 1500 GPM CUSTOM PUMPER		Bidder Complies	
		Yes	No
<ul style="list-style-type: none"> "Retarder On" (green in color) <p>Listed below are indicators that may be included, depending upon the vehicle configuration:</p> <ul style="list-style-type: none"> "Wait To Start" indicator (amber in color) "Exhaust System Fault" (amber in color) "Topps System Fault" (amber in color) "PTO Engaged" (green in color) "Inter Axle Lock" (amber in color) "Driver Controlled Diff Lock" (green in color) "Ok to Pump" (green in color) "Auto Traction Control" (amber in color) "Retarder Active" (amber in color) "Auxiliary Brake Active" (amber in color). "ATC Disabled" indicator (red in color) "ATC Active" indicator (yellow in color) <p><u>LOWER LEFT AUXILIARY SWITCH PANEL</u></p> <p>The driver's lower left panel shall be capable of housing five (5) guarded type rocker switches. Examples of the switches that shall be installed in this area are automatic chains, fan clutch override, ATC, inter-axle diff lock, electric fuel pump, all wheel drive, etc.</p> <p><u>PUMP SHIFT CONTROL</u></p> <p>The pump shift control and pump engaged indicator light shall be mounted in the driver's lower left panel. This control shall be equipped with a mechanical type lock to prevent inadvertent activation or de-activation. The lever positions and indicator light shall be clearly marked.</p> <p><u>OFFICER DASH</u></p> <p>There shall be a flat surface area in front of the officer for use with such items as a lap top computer.</p> <p><u>CENTER OVERHEAD PANEL</u></p> <p>An overhead console with a removable pewter panel shall be provided on the cab interior overhead between the driver and officer to permit installation of cab stereo, intercom systems, arrow stick controls, etc. The overhead console shall be approximately 27" wide x 4" high x 13" deep and shall be integrated into the ABS overhead center panel. The overhead console shall not obstruct the driver's vision through the officer's side window.</p> <p><u>CLIMATE CONTROL SYSTEM</u></p> <p>A climate-control system shall be provided for total cab environmental comfort. This system shall provide heat, cooling and defrost capabilities to various areas in the cab. The system shall consist of a single evaporator unit, mounted in the center overhead of the cab.</p> <p>The ceiling mounted evaporator/heater unit shall include the following:</p> <ul style="list-style-type: none"> Heavy-duty, high output blower. High efficiency coil that includes "rifled" tubing and oversized header tubes for maximum refrigerant distribution. Four (4) 3" diameter, adjustable louvers; two (2) each side of the cab overhead, facing the driver and officer seat positions. Two (2) larger louvers located in the center of the overhead assembly, facing the windshield. 			
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<div> <div>SPECIFICATIONS FOR ONE (1) 1500 GPM CUSTOM PUMPER</div> </div>	Bidder Complies	
	Yes	No
<div> <ul style="list-style-type: none"> • A large center mounted multi-vent defroster louver positioned above the windshield to provide adequate airflow for windshield defrost. • Four (4) integral 3" diameter louvers, one (1) below the driver and officer seat positions and one (1) under each outboard rear facing crew seat. • Damper controls shall be pneumatically operated to provide air discharge to the windshield, front overhead air discharge louvers or the seat riser/floor outlets as required. • An adjustable electric water valve to control the amount of heat. • Housing shall be fully insulated and enclosed. • BTU: 71,000 A/C • BTU: 85,000 Heat • CFM: 680 Heat as mounted in the cab • CFM: 680 A/C as mounted in the cab <p>The ceiling mounted evaporator unit shall be designed to include a deep well condensate collection pan, which shall include an automatic air vacuum pump to ensure proper drainage.</p> <p>The ceiling mounted evaporator unit shall be enclosed with an ergonomically designed, custom padded ABS panel to provide maximum headroom and a pleasing appearance.</p> <p>A serviceable foam intake filter shall be installed on the rear of the evaporator.</p> <p>The controls panel shall actuate the air-distribution system with air cylinders, which are to be separated from the brake system by an 85-90 psi pressure protection valve.</p> <p>All defrost/heating systems will be plumbed with one (1) seasonal shut-off valve mounted near the engine.</p> <p><u>ROOF MOUNT CONDENSER</u></p> <p>A 12-volt roof top dual condenser shall be strategically positioned on the cab roof so as not to interfere with any emergency lighting systems. The condenser shall be designed with high performance, long life fan assemblies. The fan motors are to be equipped with sealed housings and shaft.</p> <p>The condenser and coil design shall include rifled tubing for maximum efficiency. Each coil shall be painted black. The condenser unit must include a receiver drier with a high and low pressure switch. The wire harness shall include necessary wiring for the clutch circuit as well as a separate power relay circuit.</p> <p>Mounting design shall enable easy servicing of all components and unit replacement if necessary.</p> <p><u>CLIMATE CONTROL SWITCHES</u></p> <p>The driver's overhead panel shall contain all controls for the cab climate control system. The following controls shall be provided: mode selector switch, front fan speed switch, rear fan speed switch, air conditioning on/off switch, and temperature control dial. All controls shall be clearly labeled, adequately backlit, and installed in an easily removable panel.</p> <p><u>CAB TILT ASSEMBLY</u></p> <p>A hydraulic cab lift system shall be provided, consisting of an electric-powered hydraulic pump, fluid reservoir, dual lift cylinders, remote cab lift controls and all necessary hoses and valves.</p> <p>The cab tilt mechanism shall be custom designed for ease of maintenance and consist of two (2) hydraulic cylinders with a maximum lift capacity of 19,625 pounds. Hydraulic lines shall be rated at</p> </div>		
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<div> <div>SPECIFICATIONS FOR ONE (1) 1500 GPM CUSTOM PUMPER</div> </div>	Bidder Complies	
	Yes	No
<p>20,000 PSI burst pressure. The hydraulic cylinders shall be equipped with a velocity fuse that protects the cab from accidentally descending when the cab is in the tilt position.</p> <p>Hydraulic cylinders shall be detachable to allow removal of the engine for major service. A remote cable operated mechanical cylinder stay bar and release shall be provided to insure a positive lock in the tilted position.</p> <p>The two (2) rear outboard cab latches shall be of the hydraulic pressure release, automatic re-latching type, and provide an automatic positive lock when the cab is lowered. The latch shall not disengage or experience any damage when subjected to a pull apart tensile load of 6,000 lbs. The hydraulic pressure required to unlock the latch shall not exceed 550 PSI. The latch shall withstand 5,000 PSI without leaks or damage and withstand 1,000 continuous cycles of operation under a load of 1,000 lbs at liftoff. The tilt pump shall be electric over hydraulic type, with a pressure rating of not less than 4,000 PSI. Additionally, the cab tilt device shall be both electrically and hydraulically interlocked to prevent inadvertent activation of the cab tilt system.</p> <ul style="list-style-type: none"> • A "CAB NOT LATCHED" indicator shall be provided in the cab dash-warning cluster. • A dual switch control system shall be provided for the cab tilt, located on the passenger side of the vehicle or on the optional tether control. System shall consist of a three (3) position toggle switch along with a rubber covered push button switch. <p><u>AUXILIARY MANUAL CAB LIFT</u></p> <p>An auxiliary manual cab lift backup system shall be furnished inside the passenger side of the pump enclosure for use in the event of total electrical shutdown.</p> <p><u>AUDIBLE ALARM (CAB TILT)</u></p> <p>An audible alarm shall be provided to alert the operator when the cab is being raised or lowered.</p> <p><u>CAB TILT SECONDARY SAFETY LOCK</u></p> <p>A secondary swing down safety bar shall be applied to the driver side cab tilt cylinder with a manual lock to engage the lock as required for extended service operations.</p> <p><u>PARKING BRAKE/CAB TILT INTERLOCK</u></p> <p>The cab tilt control shall be equipped with an interlock that shall disable the cab tilt system in the event the parking brake is not applied.</p> <p><u>CHASSIS FRAME ASSEMBLY</u></p> <p>The chassis frame shall be fabricated in its entirety at the manufacturer's facility. This shall prevent any split responsibility in warranty or service.</p> <p>The frame shall consist of two (2) channels fastened together by cross members. All structural fasteners used in the frame shall be Grade 8 hardware. Hardened steel washers shall be used under all bolt heads and nuts to avoid stress concentrations. Top flange shall be free of bolt heads. All spring hangers shall be machined steel castings. Weldment type chassis and the use of Huck bolts shall not be used.</p> <p>Each main frame rail shall be 10-1/4" x 4" x 3/8", fabricated from 110,000 PSI minimum yield steel, with a minimum section modulus of 18.396 cu in and a resisting bending moment (RBM) of 2,023,560 inch pounds. The frame shall be drilled (not punched) for the specific apparatus under construction, thereby eliminating any unnecessary holes or modifications.</p>		
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<div> <div>SPECIFICATIONS FOR ONE (1) 1500 GPM CUSTOM PUMPER</div> </div>	Bidder Complies	
	Yes	No
<p>The chassis frame assembly, consisting of frame rails, cross members, axles and steering gear(s), shall be finish painted before installation of any electrical wiring, fuel system components, or air system components. All components or brackets fastened to the frame rails shall be cleaned, primed and painted prior to being attached to the frame rails.</p> <p><u>FRONT BUMPER</u></p> <p>A 12" high, 101" wide, painted steel front bumper shall be provided. The bumper shall be constructed from 3/8" steel, which shall be designed with 45-degree welded corners and a 2" flange on the top and bottom. The ends of the bumper shall be supported by horizontal channels, which shall extend from the frame rails to the sides of the bumper. The color of the bumper shall match the cab and body base color.</p> <p><u>BUMPER EXTENSION</u></p> <p>The bumper shall be extended 16" with a polished aluminum tread plate gravel shield enclosing the top and ends.</p> <p><u>GRAVEL SHIELD</u></p> <p>The polished aluminum tread plate gravel shield shall terminate under the top bumper flange.</p> <p><u>ELECTRIC WINCH</u></p> <p>A Warn Series M15000 model #47801, 12 volt 15000 lb. electric planetary winch shall be mounted between the frame rails at the front bumper extension. The winch shall be equipped with an automatic disk brake, heavy duty thermally protected series wound industrial electric motor and a hardened steel 3-stage planetary gear train.</p> <p>A 12' industrial remote control head shall be provided with the remote plug mounted directly on the winch housing. The winch shall be equipped with 90' of 7/16" EIPS industrial grade wire rope, model #61950, including hook. A four-way fair lead roller assembly, model #61956, shall be provided at the winch opening in the front bumper.</p> <p>A hinged tread plate lid shall be provided on the bumper extension to access the winch for service and to plug the remote control into the winch.</p> <p>The winch shall meet all SAE J 706 requirements as outlined in the latest revision of NFPA 1901.</p> <p><u>STORAGE WELL - DRIVER SIDE</u></p> <p>One (1) storage well constructed of 1/8" aluminum shall be installed in the gravel shield. This storage well shall be located on the driver side of the bumper extension. The bottom of the storage well shall have a minimum of four (4) drain holes. The storage well shall be constructed to fit at a minimum 100 feet of 1 3/4" hose.</p> <p>The driver side front bumper hose well shall be furnished with Velcro straps to secure the hose stored in the well. The straps shall be attached to each side of the hose well with stainless steel footman loops.</p> <p><u>CORNERING LIGHTS</u></p> <p>A pair of Whelen #5VC03ZCR LED lights shall be provided and shall be mounted vertically, (1) one each side of the custom chassis front bumper, in a Whelen #5TSMAC chrome plated flange. The lights shall be wired to activate with the turn signals.</p>		
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<div> <div>SPECIFICATIONS FOR ONE (1) 1500 GPM CUSTOM PUMPER</div> </div>	Bidder Complies	
	Yes	No
<div> <div>FRONT TOW HOOKS</div> <p>Two (2) front painted tow hooks shall be fastened directly to the frame, below the front bumper. The tow hooks shall be fastened with grade 8 bolts and nuts.</p> </div> <div> <div>FRONT AXLE</div> <p>Front axle shall be a Meritor MFS-20-133 A-N, includes low friction "Easy Steer" bushing technology for maximum steering ease and longer life.</p> <p>The front axle shall be rated at 21,480 lbs.</p> </div> <div> <div>FRONT BRAKES</div> <p>Meritor EX-225 H, 17" disc brakes shall be provided for the front axle. The front brakes shall be full air actuated with automatic slack adjustment.</p> </div> <div> <div>FRONT SUSPENSION</div> <p>Front suspension shall be progressive rate front leaf springs. The spring shall be permanently pinned at the front and have a shackle double pinned mounting at the rear.</p> <p>The front leaf springs shall have a minimum of 10 leaves, a minimum length of 51", and a minimum width of 3-1/2". The capacity at ground shall be 21,500 lbs. All springs shall be of center bolt design. All spring pins shall be positively restrained from rotating in brackets and shackles.</p> </div> <div> <div>FRONT SHOCK ABSORBERS</div> <p>The front suspension system shall be equipped with Monroe, model "Magnum - 70", double acting hydraulic shock absorbers. Shock absorbers to have a minimum bore of 1.38" and an outside diameter of approximately 3-1/4".</p> </div> <div> <div>REAR AXLE</div> <p>Rear axle shall be a single, Meritor RS-26-185 with a capacity of 27,000 lbs. (Minimum). Axle shall be a single reduction axle with hypoid gearing and oil-lubricated wheel bearings. Oil seals shall be provided as standard equipment.</p> </div> <div> <div>REAR BRAKES</div> <p>Meritor EX-225 H, 17" disc brakes shall be provided for the rear axle. The rear brakes will be full air actuated with automatic slack adjustment.</p> </div> <div> <div>REAR AXLE TOP SPEED</div> <p>The rear axle/s shall be geared for a vehicle top speed in accordance with NFPA sections 4.15.2 and 4.15.3.</p> <p>Units with GVWR over 26,000 pounds shall be limited to 68 mph. If the combined tank capacity is over 1250 gallons of foam and water or the GVWR is over 50,000 pounds, the vehicle top speed shall be limited to 60 mph or the fire service rating of the tires, whichever is lower.</p> </div> <div> <div>TIRE CHAINS</div> <p>The vehicles rear drive axle shall be equipped with an On-Spot tire chain system. The system shall utilize the existing vehicle air compressor system. A switch shall be provided in the drivers console area to control the activation of the chains. The switch shall have a safety feature, which does not allow for inadvertent activation.</p> </div>		
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	Yes	No
<div> <div> <div>REAR SUSPENSION</div> <p>The rear suspension shall be leaf type, variable rate with a 31,000 lb. rating. The main spring assembly shall consist of 14 leaves with the main spring measuring 60.5" L x 3" W.</p> <p>There shall be a rubber block helper mounted above the leaf springs, rated at 4,500 lbs. Two (2) fully wrapped leaves shall transmit driving and braking torque. The rating shall be designed to match or exceed the rear axle. Designs allowing the main pack to float are not acceptable.</p> </div> <div> <div>BRAKE SYSTEM</div> <p>A dual circuit, air operated braking system, meeting the design and performance requirements of FMVSS -121 and the operating test requirements of NFPA 1901 current edition shall be installed. It shall be direct air type with dual air treadle in the cab. The system shall be powered by an engine mounted, gear driven air compressor protected by a heated air dryer.</p> <p>The air system shall be plumbed with reinforced, air brake tubing/hose in conformance to SAE J 844-94, Type B and U.S.D.O.T. standards. The compressor discharge shall be plumbed with stainless steel braided hose lines with a Teflon lining. Eaton Synflex Eclipse Air Brake tubing shall be run along the inside frame rails and connected with push to connect type fittings that meet or exceed all industry standards. All Synflex tubing shall be secured with non-conductive, corrosion resistant strapping mounted with standoff fasteners. Cord reinforced rubber hose lines with brass fittings shall be installed from the frame rails to axle mounted air connections.</p> <p>The air system shall provide a rapid air build-up feature and low-pressure protection valve with light and buzzer, designed to meet the requirements of NFPA 1901, current edition.</p> </div> <div> <div>ABS SYSTEM</div> <p>An Anti-Skid Braking System (ABS) shall be provided to improve braking control and reduce stopping distance. This braking system shall be fitted to all of the axles. All electrical connections shall be environmentally sealed, water, weatherproof, and vibration resistant.</p> <p>The system shall constantly monitor wheel behavior during braking. Sensors on each wheel shall transmit wheel speed data to an electronic processor which shall sense approaching wheel lock causing instant brake pressure modulation up to 5 times per second in order to prevent wheel lockup. Each wheel shall be individually controlled.</p> <p>To improve service trouble shooting, provisions in the system for an optional diagnostic tester shall be provided. The system shall test itself each time the vehicle is started. A dash-mounted light shall go out once the vehicle has attained 4 mph after successful ABS start-up. To improve field performance; the system shall be equipped with a dual circuit design. The system circuits shall be configured in a diagonal pattern. Should a malfunction occur, the defective circuit shall revert to normal braking action. A warning light shall signal malfunction to the operator. The system shall consist of a wheel mounted toothed ring, sensor, sensor clip, electronic control unit and solenoid control valve.</p> <p>The sensor clip shall hold the sensor in close proximity to the toothed ring. An inductive sensor consisting of a permanent magnet with a round pole pin and coil shall produce an alternating current with a frequency proportional to wheel speed. The unit shall be sealed, corrosion resistant and protected from electromagnetic interference. The electronic control unit shall monitor the speed of each wheel. A deviation shall be corrected by cyclical brake application and release. If a malfunction occurs, the defective circuit shall signal the operator and the malfunctioning portion of the system shall shut down. The system shall be installed in a diagonal pattern for side-to-side control. The system shall insure that each wheel is braking to optimum efficiency up to 5 times a second.</p> <p>The system shall also control application of the auxiliary engine exhaust or drive line brakes to prevent wheel lock.</p> </div> </div>		
<div> <div>MADISON HOSE COMPANY # 1</div> </div>		

<div> <div>SPECIFICATIONS FOR ONE (1) 1500 GPM CUSTOM PUMPER</div> </div>	Bidder Complies	
	Yes	No
<div><u>AIR LINES</u></div> <p>The entire chassis air system shall be plumbed utilizing reinforced, Synflex air lines. All of the airlines shall be color coded to correspond with an air system schematic and shall be adequately protected from heat and chafing.</p> <div><u>AIR COMPRESSOR</u></div> <p>Air compressor shall be a Wabco brand, minimum of 18.7 cubic feet per minute capacity. Air brake system shall be the quick build up type. The air compressor discharge line shall be stainless steel braid reinforced Teflon hose.</p> <p>A pressure protection valve shall be installed to prevent the use of air horns or other air operated devices should the air system pressure drop below 80 psi (552 kPa).</p> <p>The chassis air system shall meet NFPA 1901, latest edition for rapid air pressure build-up within sixty (60) seconds from a completely discharged air system. This system shall provide sufficient air pressure so that the apparatus has no brake drag and is able to stop under the intended operating conditions following the sixty (60) seconds build-up time.</p> <div><u>BRAKE TREADLE VALVE</u></div> <p>A Bendix dual brake treadle valve shall be mounted on the floor in front of the driver. The brake control shall be positioned to provide unobstructed access and comfort for the driver.</p> <div><u>PARKING BRAKE</u></div> <p>Parking brake shall be of the spring-actuated type, mounted on the rear axle brake chambers. The parking brake control shall be mounted on the cab center instrument panel. A red indicator light shall be provided in the driver dash panel that shall illuminate when the parking brake is applied.</p> <p>The parking brake shall be plumbed to provide all wheel lock-up when applied.</p> <div><u>AUXILIARY AIR INLET/AUTO EJECT</u></div> <p>A Kussmaul Auto Air Eject #091-28 inlet shall be provided on the driver side of the cab, exact location to be determined during pre-construction. The Air Eject shall be mounted using a Kussmaul Weatherproof Adapter Kit #091-28AK.</p> <p>The Kussmaul air-eject connection shall be equipped with a Red weatherproof cover.</p> <p>The air eject shall be located in the area directly adjacent to the driver's side cab door, above the side air grille.</p> <div><u>BACK STOP SPLIT REAR BUMPER SAFETY SYSTEM</u></div> <p>A Croft "Back Stop" split rear bumper safety system shall be installed. The system consists of a rubber bumper that when it strikes an object, it shall apply the air brakes immediately.</p> <div><u>FRONT WHEELS & TIRES</u></div> <p>The front wheels shall be 22.5" x 12.25" ten stud, hub piloted, DuraBright aluminum disc type.</p> <p>The aluminum disc front wheels shall be provided with bright nut covers and hub caps.</p>		
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SPECIFICATIONS FOR ONE (1) 1500 GPM CUSTOM PUMPER	Bidder Complies																					
	Yes	No																				
<p>The front tires shall be Michelin 425/65R22.5 "20 Ply" tubeless radial XZL wide base on/off road traction tread. The tires shall be fire service rated up to 24,400 lbs and shall have a top speed of 60 mph when inflated to 120 psi.</p> <p>Fire Service Rating means operations not to exceed one hour loaded travel at maximum speed, with at least a one hour cool down prior to another loaded run.</p> <p>Industry load and inflation standards are in a constant state of change. Printed material may not reflect the latest load and inflation standards.</p> <p><u>REAR WHEELS & TIRES</u></p> <p>The single rear axle wheels shall be 22.5" x 8.25" ten stud, hub piloted disc type. The inner wheels shall be painted steel; the outer wheels shall be DuraBright aluminum.</p> <p>The single rear axle aluminum disc wheels shall be provided with bright nut covers and hub caps.</p> <p>The rear tires shall be Michelin 12R22.5 "16 Ply" tubeless radial XZE highway tread. The tires shall be fire service rated up to 28,880 lbs and shall have a top speed of 75 mph when inflated to 120 psi.</p> <p>Fire Service Rating means operations not to exceed one hour loaded travel at maximum speed, with at least a one hour cool down prior to another loaded run.</p> <p>Industry load and inflation standards are in a constant state of change. Printed material may not reflect the latest load and inflation standards.</p> <p><u>TIRE PRESSURE MONITORING DEVICES</u></p> <p>Each tire shall be equipped with an LED tire alert pressure management system (Vecsafe equal) that shall monitor tire pressure. A chrome plated brass sensor shall be provided on the valve stem of each tire.</p> <p>The sensor shall calibrate to the tire pressure when installed on the valve stem for pressures between 20 and 120 psi. The sensor shall activate an integral battery operated LED when the pressure of that tire drops 8 psi.</p> <p>Removing the cap from the sensor shall indicate the functionality of the sensor and battery. If the sensor and battery are in working condition, the LED shall immediately start blinking.</p> <p><u>ENGINE</u></p> <p>Engine shall be a Cummins, Model ISL9 450, diesel, turbo-charged, electronically controlled, per the following specifications.</p> <table><tr><td>• Max. Horsepower</td><td>450 HP @ 2100 RPM</td></tr><tr><td>• Governed Speed</td><td>2200 RPM</td></tr><tr><td>• Peak Torque</td><td>1250 lb. ft. @ 1400 RPM</td></tr><tr><td>• Cylinders</td><td>Six (6)</td></tr><tr><td>• Operating Cycles</td><td>Four (4)</td></tr><tr><td>• Bore & Stroke</td><td>4.49 x 5.69 in.</td></tr><tr><td>• Displacement</td><td>543 cu. in.</td></tr><tr><td>• Compression Ratio</td><td>16.6:1</td></tr><tr><td>• Governor Type</td><td>Limiting Speed</td></tr><tr><td>• Drive line Size</td><td>1710.</td></tr></table>	• Max. Horsepower	450 HP @ 2100 RPM	• Governed Speed	2200 RPM	• Peak Torque	1250 lb. ft. @ 1400 RPM	• Cylinders	Six (6)	• Operating Cycles	Four (4)	• Bore & Stroke	4.49 x 5.69 in.	• Displacement	543 cu. in.	• Compression Ratio	16.6:1	• Governor Type	Limiting Speed	• Drive line Size	1710.		
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	Yes	No
<p>Engine oil filters shall be engine manufacturers branded or approved equal. Engine oil filters shall be accessible for ease of service and replacement.</p> <p>A fuel/water separator shall be provided.</p> <p><u>ENGINE CHASSIS CERTIFICATION</u></p> <p>The engine shall be installed in accordance with engine manufacturer's instructions. The apparatus manufacturer shall be able to furnish proof of engine installation approval by the engine manufacturer.</p> <p><u>COOLING/RADIATOR</u></p> <p>The radiator and the complete cooling system shall meet or exceed NFPA and engine manufacturer cooling system standards.</p> <p>To provide maximum corrosion resistance and cooling performance, the entire radiator core shall be constructed using long life aluminum alloy. The core shall be made of aluminum fins, having a serpentine design, brazed to aluminum tubes. The tubes shall be brazed to aluminum headers. No solder joints or leaded material of any kind shall be acceptable in the core assembly.</p> <p>The radiator core shall have a height of 35.92" x a width of 37.62". Supply and return tanks made of glass-reinforced nylon shall be crimped on to the core assembly using header tabs and a compression gasket to complete the radiator core assembly. The radiator shall be compatible with commercial antifreeze solutions.</p> <p>There shall be a full steel frame around the entire radiator core assembly. The radiator core assembly shall be isolated within the steel frame by rubber inserts to enhance cooling system durability and reliability. The radiator shall be mounted in such a manner as to prevent the development of leaks caused by twisting or straining when the apparatus operates over uneven ground. The radiator assembly shall be isolated from the chassis frame rails with rubber isolators.</p> <p>The cooling system shall include a surge tank mounted to the top of the radiator framework that shall remove air in the system. The surge tank shall be equipped with a sight glass to monitor the level of coolant. The radiator shall be equipped with a dual seal cap that shall allow for expansion and recovery of coolant into a separate integral chamber.</p> <p>The cooling system shall be designed for a maximum of fifteen (15) PSI operation.</p> <p>A drain port shall be located at the lowest point of the cooling system and/or the bottom of the radiator to permit complete flushing of the coolant from the system.</p> <p>Extended life engine coolant shall provide anti-freeze protection to -30° F. The mixture shall be per the engine manufacture's specifications.</p> <p>The engine cooling system shall have an inline coolant filter that shall have a shut off valve for ease of maintenance.</p> <p>The engine cooling system shall be certified by the engine manufacturer to meet cooling index requirements for a minimum ambient temperature or 110-degrees Fahrenheit.</p> <p><u>TRANSMISSION COOLER</u></p> <p>A shell and tube transmission oil cooler shall be provided using engine coolant to control the transmission oil temperature. The cooler shall have an aluminum shell and copper tubes. The cooler shall be assembled using pressed in rubber tube sheets to mechanically create a reliable seal</p>		
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<div> <div>SPECIFICATIONS FOR ONE (1) 1500 GPM CUSTOM PUMPER</div> </div>	Bidder Complies	
	Yes	No
<p>between the coolant and the oil. No brazed, soldered, or welded connections shall be used to separate the coolant from the oil.</p> <p><u>RADIATOR SKID PLATE</u></p> <p>The radiator installation shall include a heavy-duty radiator skid plate to protect the radiator from debris or obstructions under the chassis. The skid plate shall be designed so the angle of approach is not effected. NO EXCEPTIONS!</p> <p><u>CHARGE AIR COOLER</u></p> <p>The charge air cooler shall be constructed of aluminum with cast aluminum side tanks. To not restrict air flow to the radiator, the charge air cooler shall be designed to be an integral part of the radiator assembly, mounted directly on top of the radiator. Rubber isolators shall be used at the mounting points to reduce transmission of vibrations.</p> <p>Where applicable, the charge air cooler pipes shall be constructed of appropriately sized aluminized steel tubing with 0.06" wall thickness and formed hose barbs. The connections between these pipes, the engine and charged air cooler, shall be made using high temperature silicone hoses rated for use in temperature up to 500°F, and heavy duty constant tension T-Bolt spring hose clamps. These connections shall adequately allow for movement of the engine relative to the charged air cooler.</p> <p>Charge air coolers that are located in front of the radiator, that block or restrict air flow into the engine radiator or introduce above ambient temperature air into the radiator in any way shall not be used.</p> <p><u>COOLING SYSTEM FAN</u></p> <p>The engine cooling system shall incorporate a heavy duty fan, installed on the engine and include a shroud.</p> <p>The fan shall be equipped with an air operated clutch fan, which shall activate at a pre-determined temperature range.</p> <p>Recirculation shields shall be installed to ensure that air which has passed through the radiator is not drawn through it again.</p> <p><u>COOLANT HOSE AND PIPING</u></p> <p>All coolant piping shall be constructed of appropriately sized powder coated steel tubing with 0.06" wall thickness and formed hose barbs. All connections between coolant pipes and chassis components shall be made using appropriately sized silicone hoses or elbows, rated for use in temperatures ranging from -60°F to +350°F, and appropriately sized constant torque hose clamps. These connections shall be minimal in number to reduce the number potential leak points, and shall adequately allow for movement of the engine relative to chassis mounted components. All integral hoses supplied with the engine shall be as supplied by the engine manufacturer.</p> <p><u>HEATER HOSES</u></p> <p>Premium Goodyear Hi-Miler® blue heater hoses shall be furnished for the heater system. The Hi-Miler® hose shall have a core of black Versigard (EPDM) with spiral Flextan reinforcement and blue Versigard coating. All heater hoses shall be equipped with constant torque type hose clamps. All integral hoses supplied with the engine shall be as supplied by the engine manufacturer.</p>		
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<div> <div>SPECIFICATIONS FOR ONE (1) 1500 GPM CUSTOM PUMPER</div> </div>	Bidder Complies	
	Yes	No
<div> <div> <div>LOW COOLANT INDICATOR LIGHT AND ALARM</div> <p>A low engine coolant indicator light located in the dash instrument panel shall be provided. An audible alarm shall be provided to warn of the low coolant condition.</p> </div> <div> <div>ENGINE BRAKE</div> <p>An engine compression brake shall be furnished for increased braking capabilities. Controls shall be as provided by the engine manufacturer and shall be activated by releasing the throttle pedal to the idle position.</p> <p>The engine compression brake shall have dash mounted control switches to turn the brake on or off as well as to control the operational level of the brake.</p> <p>The engine brake shall be wired in such a manner so as to illuminate the chassis brake lights when the engine brake is engaged and operating.</p> <p>The engine brake shall be interlocked with the PTO operation and shall automatically disengage any time the apparatus is operating with the PTO active.</p> </div> <div> <div>ENGINE FAST IDLE</div> <p>A fast idle for the electronic controlled engine shall be provided. The fast idle shall be controlled by an ON/OFF switch on the dash.</p> <p>An electronic interlock system shall prevent the fast idle from operating unless the transmission is in "Neutral" and the parking brake is fully engaged. If the fast idle control is used in conjunction with a specified engine/transmission driven component or accessory, the fast idle control shall be properly interlocked with the engagement of the specified component or accessory.</p> </div> <div> <div>AIR CLEANER</div> <p>An engine air cleaner shall be provided. The air cleaner shall include a dry type element and shall be installed in accordance with the engine manufacturer's recommendations. The air cleaner shall be located to the rear of the engine, with streamline air pipes and hump hose connections from the inlet to the air cleaner and from the air cleaner to the turbo. The air cleaner shall be easily accessible when the cab is tilted. The air cleaner shall be plumbed to the air intake system that shall include a self sealing connection between the cab and air cleaner assembly to allow the cab to be tilted.</p> </div> <div> <div>SPARK ARRESTOR</div> <p>A spark arrestor shall be installed in the chassis air intake system. This arrestor shall be mounted behind the intake grille to filter out airborne embers. The spark arrestor housing must be easily accessible when the cab is tilted.</p> </div> <div> <div>ACCELERATOR CONTROL</div> <p>A floor mount accelerator pedal shall be installed on the floor in front of the driver. The pedal shall be positioned for comfort with ample space for fire boots and adequate clearance from the brake pedal control.</p> </div> <div> <div>REMOTE THROTTLE CONTROL HARNESS</div> <p>An apparatus interface wiring harness for the engine shall be supplied with the chassis. The harness shall include a connector for connection to the chassis harness which shall terminate in the</p> </div> </div>		
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	Yes	No
<p>left frame rail behind the cab for reconnection to required throttle control harnesses. The harness shall contain necessary connectors for a pressure governor and a multiplexed gauge. Separate circuits shall be included for pump controls, "Pump Engaged" and "OK to Pump" indicator lights, open compartment ground, start signal, park brake ground, ignition signal, master power, ignition, air horn solenoid switch, high idle switch and high idle indication light.</p> <p>An apparatus interface wiring harness shall also be included which shall be wired to the cab harness interface connectors and shall incorporate circuits with relays to control pump functions. This harness shall control the inputs for the transmission lock up circuits, governor/hand throttle controls and dash display which shall incorporate "Pump Engaged" and "OK to Pump" indicator lights. The harness shall contain circuits for the apparatus builder to wire in a pump switch.</p> <p><u>ENGINE PROGRAMMING REMOTE THROTTLE</u></p> <p>The engine ECM (Electronic Control Module) discreet wire remote throttle circuit shall be turned off for use with a J1939 based pump controller or when the discreet wire remote throttle controls are not required.</p> <p><u>TRANSMISSION</u></p> <p>An Allison World Transmission, Model 3000 EVS electronically controlled, automatic transmission shall be provided. Transmission specifications shall be as follows:</p> <ul style="list-style-type: none"> • Max. Gross Input Power 450 HP • Max. Gross Input Torque 1250 lb. ft. • Input Speed (Range) 2000- 2800 RPM • Direct Gear (Pumping) 4th (Lock-up) <p>Transmission installation shall be in accordance with the transmission manufacturer's specification. The transmission shall be readily and easily removable for repairs or replacement.</p> <p>One (1) PTO opening shall be provided on both the left and right side of the converter housing (positions four (4) o'clock and eight (8) o'clock).</p> <p>The transmission shall be calibrated for five (5) forward gears and one (1) reverse gear. Each gear shall have the following ratios:</p> <ul style="list-style-type: none"> • First 3.49:1 • Second 1.86:1 • Third 1.41:1 • Fourth 1.00:1 • Fifth 0.75:1 • Reverse -5.03:1 <p>A back-lighted, "Bump-Shift" lever selector shall be mounted in the cab, convenient to the driver. Shift control shall be approved by the transmission manufacturer.</p> <p><u>TRANSMISSION MODE</u></p> <p>The transmission, upon startup, shall select four (4) speed operation. By pressing the "mode" switch on the shift pad (mode on) provides access to the remaining forward gears in the transmission.</p> <p><u>TRANSMISSION OIL LEVEL SENSOR</u></p> <p>The transmission shall be equipped with the oil level sensor (OLS); this sensor shall allow the operator to obtain an indication of the fluid level from the shift selector. The sensor display shall provide the following checks, correct fluid level, low fluid level and high fluid level.</p>		
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<div> <div>SPECIFICATIONS FOR ONE (1) 1500 GPM CUSTOM PUMPER</div> </div>	Bidder Complies	
	Yes	No
<div> <div><u>PARK TO NEUTRAL</u></div> <div> <p>The transmission, upon application of the parking brake, shall automatically shift into neutral.</p> </div> </div> <div> <div><u>PRESELECT PROGRAMMING</u></div> <div> <p>The transmission shall have Allison Preselect enabled to automatically downshift when the secondary engine brake is active.</p> <p>The transmission shall be programmed at the factory to automatically downshift to 4th gear. This feature shall be enabled/disabled with the main on/off switch for the engine brake.</p> </div> </div> <div> <div><u>SYNTHETIC TRANSMISSION FLUID</u></div> <div> <p>Castrol "TRANSYND" or an equivalent synthetic TES 295 transmission fluid shall be utilized to fill the 3000 EVS transmission.</p> </div> </div> <div> <div><u>DRIVE LINES</u></div> <div> <p>Drive lines shall be Dana (Spicer) 1710 heavy duty series or equal, with "glide coat" splines on all slip shafts. The chassis manufacturer shall utilize an electronic type balancing machine to statically and dynamically balance all drive shafts. The manufacturer shall provide proof of compliance with all drive shaft manufacturer's standards and specifications. NO EXCEPTIONS</p> </div> </div> <div> <div><u>DIESEL EXHAUST FLUID TANK</u></div> <div> <p>A five (5) gallon diesel exhaust fluid (DEF) tank shall be provided and installed. The tank shall be mounted in the area of the battery box and shall be accessible through a door in the crew area step well.</p> <p>The tank shall include an internal heater that will be fed by engine coolant directly from the engine block to ensure it is always kept at the proper temperature per EPA requirements. The tank shall include a temperature sensor to control the flow of the engine coolant from the heater valve to the DEF tank.</p> <p>A DEF fluid level sensor shall be provided with the DEF tank and connected to the level gauge on the dashboard.</p> </div> </div> <div> <div><u>EXHAUST SYSTEM</u></div> <div> <p>The exhaust system shall be installed in accordance with the engine manufacturer's requirements and meet all Environmental Protection Agency and State noise level requirements. Exhaust system components shall be securely mounted and easily removable.</p> <p>The diesel particulate filter/muffler shall be fabricated from stainless steel and of a size compatible with the engine exhaust discharge.</p> <p>Exhaust tubing shall be a minimum of 16 gauge stainless steel from the turbocharger on the engine to the inlet of the diesel particulate filter. Any flexible exhaust tubing shall be HDT stainless steel type. To minimize heat build-up, exhaust tubing within the engine compartment shall be wrapped with an insulating material. Exhaust shall be wrapped from the turbocharger to the entrance of the muffler. Material shall be held in place with worm gear type clamps.</p> <p>An exhaust diffuser shall be provided to reduce the temperature of the exhaust as it exits the tailpipe.</p> </div> </div>		
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<div> <div>SPECIFICATIONS FOR ONE (1) 1500 GPM CUSTOM PUMPER</div> </div>	Bidder Complies	
	Yes	No
<div> <div> <p>Separate "regeneration" enable and prohibit switches shall be provided under the dash board on the driver's side. Each switch shall be provided with a spring loaded protective cover and shall be clearly marked as to function.</p> </div> <div> <p><u>SELECTIVE CATALYTIC REDUCTION (SCR)</u></p> <p>The vehicle shall be equipped with SCR technology that uses a urea based diesel exhaust fluid (DEF) and a catalytic converter to significantly reduce oxides of nitrogen (NOx) emissions.</p> <p>The SCR system shall reduce levels of NOx (oxides of nitrogen emitted from engines) by injecting small quantities of diesel exhaust fluid (DEF) into the exhaust upstream of a catalyst, where it vaporizes and decomposes to form ammonia and carbon dioxide. The ammonia (NH3), in conjunction to the SCR catalyst, converts the NOx to harmless nitrogen (N2) and water (H2O).</p> <p>The exhaust tailpipe extending from the SCR catalyst to the side of the vehicle shall be constructed from 16-gauge aluminized steel tubing. The exhaust discharge shall be on the officer side of the apparatus forward of the rear axle.</p> <p><u>FUEL TANK</u></p> <p>Fuel tank shall be a minimum of fifty (50) gallon capacity. It shall have a minimum fuel filler neck of 2" ID. A 1/2" minimum diameter drain plug shall be provided. The tank shall be fabricated from aluminum. Provisions for an additional feed line and fuel level float shall be provided for future use.</p> <p>The fuel tank shall be installed behind the rear wheels between the frame rails.</p> <p>The fuel tank shall meet all FHWA 393.67 requirements including a fill capacity of 95% of tank volume.</p> <p>The fuel tank shall be able to withstand a longitudinal acceleration of -23.0g at 0.166 seconds in accordance to SAE J211 standards using a channel frequency class 600 filter. Testing shall be performed at and verified by a third party testing and evaluation center.</p> <p><u>FUEL TANK STRAPS</u></p> <p>The straps supporting the diesel fuel tank shall be made of Type 304L stainless steel with grade 8, zinc coated steel hardware. NO EXCEPTIONS</p> <p>The fuel lines shall be textile reinforced synthetic rubber or plastic hose that is approved for use with diesel fuel and has a minimum max temperature rating of 250° F. The lines shall be sized to meet engine manufacture's requirements, and shall be carefully routed and secured along the inside of the frame rails.</p> <p><u>FUEL LINE SHUT-OFF VALVE</u></p> <p>A fuel line shut-off valve shall be provided between the fuel tank and the primary fuel filter.</p> <p>The valve shall be labeled "Fuel Tank Shut-Off". No reserve feature shall be included in the tank.</p> <p><u>FUEL FILTER/WATER SEPARATOR</u></p> <p>A fuel filter/water separator shall be provided in the fuel system. A "water in fuel" indicator shall be provided on the dash.</p> </div> </div>		
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<div> <div>SPECIFICATIONS FOR ONE (1) 1500 GPM CUSTOM PUMPER</div> </div>	Bidder Complies	
	Yes	No
<div><u>FUEL POCKET</u></div> <p>A fuel fill shall be provided in the left side rear wheel well area. A Cast Products heavy duty cast aluminum spring loaded hinged fill door shall be provided.</p> <p>A label indicating "Ultra Low Sulfur Diesel Fuel Only" shall be provided adjacent to the fuel fill.</p> <div><u>DUAL POWER STEERING</u></div> <p>A dual power steering system shall be provided utilizing a Sheppard model #M110 main steering gear on the driver side of the chassis and a Sheppard model #M90 steering gear on the officer side of the chassis.</p> <p>The power steering gear on the officer side of the chassis shall increase performance in turning the officer side wheel assembly, reducing loads and forces on the main gear and components.</p> <p>The steering system shall be designed to maximize the turning capabilities of the front axle no matter the rating and tire size. The use of a power assist cylinder on the officer side of the chassis is NOT ACCEPTABLE on front axles of this capacity.</p> <p>The system shall be designed utilizing an engine driven hydraulic pump, with a maximum operating pressure of 2000 PSI. Steering design shall permit a maximum of 5.6 turns from stop to stop. Steering system components shall be mounted in accordance with the steering gear manufacturer's instructions.</p> <div><u>STEERING COLUMN</u></div> <p>The steering column shall be a "Douglas Autotech" tilt and telescope column. A lever mounted on the side of the column shall control the tilt and telescope features.</p> <p>The steering shaft from the column to the miter box shall have a rubber boot to cover the shaft slip and a second rubber boot to seal the passage hole in the floor.</p> <p>There shall be a self-canceling lever that shall control the following functions:</p> <ul style="list-style-type: none"> • Left and right turn signals • High beam activation • Hazard warning switch • Windshield wiper control with Hi / Lo / Intermittent speed positions • Windshield washer control <div><u>STEERING WHEEL</u></div> <p>The steering wheel shall be a two (2) spoke, vinyl padded, minimum 18" diameter, with a center hub mounted horn button.</p> <div><u>ROAD SAFETY KIT</u></div> <p>A road safety kit shall be furnished with the following equipment:</p> <ul style="list-style-type: none"> • 2 1/2 lb. B-C fire extinguisher • Triangle safety reflectors. <div><u>CHASSIS ELECTRICAL SYSTEM</u></div> <p>All electrical wiring in the chassis shall be GXL cross link insulated type. Wiring is to be color coded and include function codes every three (3) inches on both sides. Wiring harnesses shall be</p>		

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	Yes	No
<p>routed in protective, heat resistant loom, securely and neatly installed. Two (2) power distribution centers shall be provided in central locations for greater accessibility. The power distribution centers shall contain thermal automatic reset breakers, power control relays, flashers, diode modules, daytime driving light module, and engine and transmission data links. All breakers and relays shall have a capacity substantially greater than the expected load on the related circuit, thus ensuring long component life. Power distribution centers shall be composed of a system of interlocking plastic modules for ease of custom construction.</p> <p>The power distribution centers shall be function oriented. The first is to control major truck function. The second control center shall enable overhead switching and interior operations. Each module shall be single function coded and labeled to aid in troubleshooting. The centers will also have accessory breakers and relays for future installations. All harnesses and power distribution centers shall be electrically tested prior to installation to ensure the highest system reliability.</p> <p>All external harness interfaces shall be of a triple seal type connection to ensure a proper connection. The cab/chassis and the chassis/body connection points shall be mounted in accessible locations. Complete chassis wiring schematics shall be supplied with the apparatus.</p> <p><u>WIRING HARNESS DESCRIPTION</u></p> <p>The wiring harness contained on the chassis shall be designed to utilize wires of stranded copper or copper alloy of a gauge rated to carry 125% of maximum current for which the circuit is protected without exceeding 10% voltage drop across the circuit. Wiring will be uniquely identified by color code or circuit function code, labeled at a minimum of every three (3) inches. The identification of the wiring shall be referenced on a wiring diagram. All wires conform to SAEJ1127 (Battery Cable), SAEJ1128 (Low Tension Primary Cable), SAEJ1560 (Low Tension Thin Wall Primary Cable).</p> <p>The covering of harnesses shall be moisture resistant loom with a minimum rating of 289 Degrees Fahrenheit and a flammability rating of VW-1 as defined in UL62. The covering of jacketed cable shall have a minimum rating of 289 degree Fahrenheit.</p> <p>All harnesses will be securely installed in areas protected against heat, liquid contaminants and damage. The harness connections and terminations shall use a method that provides a positive mechanical and electrical connection and are in accordance with the device manufacturer's instructions. No connections within the harness may utilize wire nut, insulation displacement, or insulation piercing components.</p> <p>All circuits shall conform to SAEJ1292. All circuits will be provided with low voltage over current protective devices. These devices shall be readily accessible and protected against heat in excess of component rating, mechanical damage, and water spray. Star washers shall not be used for ground connections.</p> <p><u>DIRECT GROUNDING STRAPS</u></p> <p>Direct grounding straps shall be mounted to the following areas; frame to cab, frame to body and frame to pump enclosure.</p> <p>All exposed electrical connections shall be coated with "Z-Guard 8000" to prevent corrosion.</p> <p><u>EMI/RFI PROTECTION</u></p> <p>The apparatus shall incorporate the latest designs in the electrical system with state of the art components to insure that radiated and conducted electromagnetic interference (EMI) and radio frequency interference (RFI) emissions are suppressed at the source.</p> <p>The apparatus proposed shall have the ability to operate in the environment typically found in fire ground operations with no adverse effects from EMI/RFI.</p>		
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	Yes	No
<p>EMI/RFI susceptibility is controlled by utilizing components that are fully protected and wiring that utilizes shielding and loop back grounds where required. The apparatus shall be bonded through wire braided ground straps. Relays and solenoids that are suspect to generating spurious electromagnetic radiation are diode protected to prevent transient voltage spikes.</p> <p>In order to fully prevent the radio frequency interference the Madison Hose Company may be requested to provide a listing of the type, power output, and frequencies of all radio and bio medical equipment that is proposed to be used on the apparatus.</p> <p><u>12 VOLT ELECTRICAL SYSTEM TESTING</u></p> <p>The apparatus low voltage electrical system shall be tested and certified by the manufacturer. The certification shall be provided with the apparatus. All tests shall be performed with air temperature between 0°F and 100°F.</p> <p>The following three (3) tests shall be performed in order. Before each test, the batteries shall be fully charged.</p> <p><u>TEST #1-RESERVE CAPACITY TEST</u></p> <p>The engine shall be started and kept running until the engine and engine compartment temperatures are stabilized at normal operating temperatures and the battery system is fully charged. The engine shall be shut off and the minimum continuous electrical load shall be activated for 10 minutes. All electrical loads shall be turned off prior to attempting to restart the engine. The battery system shall then be capable of restarting the engine. Failure to restart the engine shall be considered a test failure.</p> <p><u>TEST #2-ALTERNATOR PERFORMANCE TEST AT IDLE</u></p> <p>The minimum continuous electrical load shall be activated with the engine running at idle speed. The engine temperature shall be stabilized at normal operating temperature. The battery system shall be tested to detect the presence of battery discharge current. The detection of battery discharge current shall be considered a test failure.</p> <p><u>TEST #3-ALTERNATOR PERFORMANCE TEST AT FULL LOAD</u></p> <p>The total continuous electrical load shall be activated with the engine running up to the engine manufacturers governed speed. The test duration shall be a minimum of 2 hours. Activation of the load management system shall be permitted during this test. However, an alarm sounded due to excessive battery discharge, as detected by the system, or a system voltage of less than 11.7 volts DC for a 12 volt system, for more than 120 seconds, shall be considered a test failure.</p> <p><u>LOW VOLTAGE ALARM TEST</u></p> <p>Following completion of the preceding tests, the engine shall be shut off. The total continuous electrical load shall be activated and shall continue to be applied until the excessive battery discharge alarm is activated.</p> <p>The battery voltage shall be measured at the battery terminals. With the load still applied, a reading of less than 11.7 volts shall be considered a test failure. The battery system shall then be able to restart the engine.</p> <p>At time of delivery, documentation shall be provided with the following information:</p> <ul style="list-style-type: none"> • Documentation of the electrical system performance test • A written load analysis of the following; • Nameplate rating of the alternator 		
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	Yes	No
<div> <ul style="list-style-type: none"> Alternator rating at idle while meeting the minimum continuous electrical load Each component load comprising the minimum continuous electrical load. Additional loads that, when added to the minimum continuous load, determine the total connected load. Each individual intermittent load. <div> <div>LOAD MANAGEMENT SYSTEM</div> <p>A load management system shall be provided. The load manager shall have 16 programmable outputs to supply warning and load switching requirements. The load management system shall be capable of offering load sequencing, load shedding, fast idle control, low voltage warning, scene mode operation and response mode operation.</p> <p>Outputs 1 thru 12 shall be independently programmable to activate during the scene mode, the response mode or both. These outputs can also be programmed to activate with the ignition or master warning switch, or to sequence and shed along with the priority. Output 13 shall be designated to activate a fast idle system. Output 14 shall provide a low voltage warning for an isolated battery. Output 15 is a user configurable output and shall be programmable for activating between 10.5 and 15 volts. Output 16 shall provide a low voltage alarm that activates at the NFPA required 11.8 volts.</p> <p>The load management shall have a digital display to indicate system voltage in normal operation mode and also indicate the output configuration during programming mode.</p> <p>The load management shall also be protected against reverse polarity and shorted outputs, and be enclosed in a metal enclosure to enhance EMI/RFI protection.</p> <div> <div>CHASSIS DIAGNOSTICS SYSTEM</div> <p>Diagnostic ports shall be accessible while standing on the ground and located inside the driver's side door left of the steering column. The diagnostic panel shall allow diagnostic tools such as computers to connect to various vehicle systems for improved troubleshooting providing a lower cost of ownership. Diagnostic switches shall allow engine and ABS systems to provide blink codes should a problem exist.</p> <p>The diagnostic system shall include the following:</p> <ul style="list-style-type: none"> A single port to monitor the engine, transmission and ABS system and diagnostics of the roll sensor (if applicable) Engine diagnostic switch (blink codes) ABS diagnostic switch (blink codes) Allison Transmission Codes (through touch pad shifter) <div> <div>VOLTAGE MONITOR SYSTEM</div> <p>A voltage monitoring system shall be provided to indicate the status of the battery system connected to the vehicle's electrical load. The system shall provide visual and audible warning when the system voltage is below or above optimum levels.</p> <p>The alarm shall activate if the system falls below 11.8 volts DC for more than two (2) minutes.</p> <div> <div>INDICATOR LIGHT AND ALARM PROVE-OUT SYSTEM</div> <p>A system shall be provided which automatically tests basic indicator lights and alarms located on the cab instrument panel.</p> </div> </div> </div> </div> </div>		
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	Yes	No
<div> <div>12 VOLT SEQUENCER</div> <p>A sequencer shall be provided that automatically activates and deactivates vehicle loads in a preset sequence thereby protecting the alternator from power surges. This sequencer operation shall allow a gradual increase or decrease in alternator output, rather than loading or dumping the entire 12 volt load to prolong the life of the alternator.</p> <p>Emergency light sequencing shall operate in conjunction with the emergency master light switch. When the emergency master switch is activated, the emergency lights shall be activated one by one at half second intervals. Sequenced emergency light switch indicators shall flash while waiting for activation.</p> <p>When the emergency master switch is deactivated, the sequencer shall deactivate the warning light loads in the reverse order.</p> <p>Rear of cab Air-Conditioning and Heat shall be load managed.</p> <div>ELECTRICAL HARNESS REQUIREMENT</div> <p>To ensure dependability, all 12-volt wiring harnesses installed by the manufacturer shall conform to the following specifications:</p> <ul style="list-style-type: none"> • SAE J 1128 - Low tension primary cable • SAE J 1292 - Automobile, truck, truck-tractor, trailer and motor coach wiring • SAE J 163 - Low tension wiring and cable terminals and splice clips • SAE J 2202 - Heavy duty wiring systems for on-highway trucks • NFPA 1901 - Standard for automotive fire apparatus • FMVSS 302 - Flammability of interior materials for passenger cars, multipurpose passenger vehicles, trucks and buses • SAE J 1939 - Serial communications protocol • SAE J 2030 - Heavy-duty electrical connector performance standard • SAE J 2223 - Connections for on board vehicle electrical wiring harnesses • NEC - National Electrical Code • SAE J 561 - Electrical terminals - Eyelet and spade type • SAE J 928 - Electrical terminals - Pin and receptacle type A. <p>For increased reliability and harness integrity, harnesses shall be routed throughout the cab and chassis in a manner which allows the harnessing to be laid into its mounting location. Routing of harnessing which requires pulling of wires through tubes will not be allowed.</p> <p>Wiring shall be run in loom or conduit where exposed, and have grommets or other edge protection where wires pass through metal. Wire colors shall be integral to each wire insulator and run the entire length of each wire. Harnessing containing multiple wires and uses a single wire color for all wires shall not be allowed. Function and number codes shall be continuously imprinted on all wiring harness conductors at 3.00" intervals. All wiring installed between the cab and into doors shall be protected by a wire conduit to protect the wiring. Exterior exposed wire connectors shall be positive locking, and environmentally sealed to withstand elements such as temperature extremes, moisture and automotive fluids. Electrical wiring and equipment shall be installed utilizing the following guidelines:</p> <ul style="list-style-type: none"> • All holes made in the roof shall be caulked with silicon. NO EXCEPTIONS! Large fender washers, liberally caulked, shall be used when fastening equipment to the underside of the cab roof. • Any electrical component that is installed in an exposed area shall be mounted in a manner that shall not allow moisture to accumulate in it. Exposed area shall be defined as any location outside of the cab or body. </div>		
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	Yes	No
<div> <ul style="list-style-type: none"> For low cost of ownership, electrical components designed to be removed for maintenance shall be quickly accessible. For ease of use, a coil of wire shall be provided behind the appliance to allow them to be pulled away from the mounting area for inspection and service work. Corrosion preventative compound shall be applied to non-waterproof electrical connectors located outside of the cab or body. All non-waterproof connections shall require this compound in the plug to prevent corrosion and for easy separation of the plug. Any lights containing non-waterproof sockets in a weather-exposed area shall have corrosion preventative compound added to the socket terminal area. All electrical terminals in exposed areas shall have protective coating applied completely over the metal portion of the terminal. Rubber coated metal clamps shall be used to support wire harnessing and battery cables routed along the chassis frame rails. Heat shields shall be used to protect harnessing in areas where high temperatures exist. Harnessing passing near the engine exhaust shall be protected by a heat shield. Cab and crew cab harnessing shall not be routed through enclosed metal tubing. Dedicated wire routing channels shall be used to protect harnessing therefore improving the overall integrity of the vehicle electrical system. The design of the cab shall allow for easy routing of additional wiring and easy access to existing wiring. All standard wiring entering or exiting the cab shall be routed through sealed bulkhead connectors to protect against water intrusion into the cab. <div> <div>BATTERY CABLE INSTALLATION</div> <div> <p>All 12-volt battery cables and battery cable harnessing installed by the apparatus manufacturer shall conform to the following requirements:</p> <ul style="list-style-type: none"> SAE J 1127 - Battery Cable SAE J 561 - Electrical terminals, eyelets and spade type SAE J 562 - Nonmetallic loom SAE J 836 A - Automotive metallurgical joining SAE J 1292 - Automotive truck, truck-tractor, trailer and motor coach wiring NFPA 1901 - Standard for automotive fire apparatus. <p>Battery cables and battery cable harnessing shall be installed utilizing the following guidelines:</p> <ul style="list-style-type: none"> Splices shall not be allowed on battery cables or battery cable harnesses. For ease of identification and simplified use, battery cables shall be color coded. All positive battery cables shall be marked red in color. All negative battery cables shall be black in color. For ease of identification, all positive battery cable isolated studs throughout the cab and chassis shall be red in color. For increased reliability and reduced maintenance, all electrical buss bars located on the exterior of the apparatus shall be coated to prevent corrosion. An operational test shall be conducted to ensure that any equipment that is permanently attached to the electrical system is properly connected and in working order. <div> <div>ALTERNATOR</div> <div> <p>There shall be two (2) Delco Remy Model 55SI, 430 amp brushless, serpentine belt driven alternators. The brushless design of the 55SI transfers magnetic fields between the rotor and stator air-gap without brushes.</p> <p>The alternators installation shall be designed to provide maximum output at engine idle speed, by using "Remote Sense" in order to meet the minimum continuous electrical load of the apparatus as required.</p> <p>The alternators shall carry a 3 Year/Unlimited Mile warranty.</p> </div> </div> </div> </div> </div>		
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<div> <div>SPECIFICATIONS FOR ONE (1) 1500 GPM CUSTOM PUMPER</div> </div>	Bidder Complies	
	Yes	No
<div> <div>BATTERY SYSTEM</div> <div> <p>Six (6) Trojan ST1000 Group 31 Absorbed Glass Mat, maintenance free batteries shall be provided. Each battery shall be rated at 1,000 CCA at 0° F and shall have a reserve capacity of 200 minutes.</p> <p>Wiring for the batteries shall be 4/0 welding type dual path starting cables for SAEJ541.</p> </div> <div>BATTERY STORAGE</div> <div> <p>Batteries shall be securely mounted in fixed 3/16" stainless steel trays located on each side of the chassis frame. Complete access shall be provided when the cab is fully tilted. Batteries shall be mounted on non-corrosive matting material.</p> <p>The battery tray shall be able to withstand a longitudinal acceleration of -46.5g at 0.246 seconds in accordance to SAE J211 standards using a channel frequency class 600 filter. Testing shall be performed at and verified by a third party testing and evaluation center.</p> </div> <div>BATTERY DISCONNECT SWITCH</div> <div> <p>The chassis batteries shall be wired in parallel to a single 12 volt electrical system, controlled through a heavy duty master disconnect switch. The master disconnect switch shall be located within easy access of the driver upon entering or exiting the cab.</p> </div> <div>BATTERY JUMPER STUDS</div> <div> <p>A set of Cole Hersee battery jumper studs, model #46210-02 (red) and #46210-03 (black) shall be provided to allow the battery system to be jump started or charged from an external source. The studs shall be located on the bottom of the battery box on the driver's side of the chassis. Each stud shall be equipped with both a rubber protector cap and a 2" square non-conductive plate to prevent accidental shorting. The jumper studs shall be easily accessible without obstruction.</p> <p>An additional set of Cole Hersee battery jumper studs, model #46210-02 (red) and #46210-03 (black) shall be provided to allow the battery system to be jump started or charged from an external source. The studs shall be located on the bottom of the battery box on the officer's side of the chassis. Each stud shall be equipped with rubber protector caps. The jumper studs shall be easily accessible without obstruction.</p> </div> <div>120 VOLT SHORELINE CONNECTION</div> <div> <p>One (1) Kussmaul "Super" Auto Eject model 091-55-20-120, automatic, 120 volt, 20 amp shoreline disconnect shall be provided for the on board, 110 volt battery charging systems.</p> <p>The disconnect shall be equipped with a NEMA 5-20 P male receptacle, which shall automatically eject the shoreline when the vehicle starter is energized. A label shall be provided indicating voltage and amperage ratings.</p> </div> <div>SHORELINE POWER INLET PLATE</div> <div> <p>A shoreline power receptacle information plate shall be permanently affixed at or near the power inlet. The plate shall indicate the following;</p> <ul style="list-style-type: none"> Type of Line Voltage Current Rating in Amps Power Inlet Type (DC or AC). </div> <div>RED COVER FOR AUTO-EJECT RECEPTACLE</div> <div> <p>The Kussmaul auto-eject connection shall be equipped with a Red weatherproof cover.</p> </div> </div>		
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<div> <div>SPECIFICATIONS FOR ONE (1) 1500 GPM CUSTOM PUMPER</div> </div>	Bidder Complies	
	Yes	No
<div> <div>SHORELINE LOCATION</div> <p>The shoreline receptacle shall be located in the area directly adjacent to the driver's side cab door.</p> <div> <div>BATTERY CHARGER SYSTEM</div> <p>A Kussmaul model # 091-187-12-REMOTE, "Auto Charge 1200" high output, fully automatic battery charger shall be provided for maintaining the vehicle battery system. Unique electronic sensing circuits sense the true battery voltage while eliminating the need for external sense wires. Output current shall be 40 amperes @ 12 volt DC.</p> <p>A LED bar graph display shall be located near the shoreline connection to monitor the battery status.</p> <div> <div>EMERGENCY SWITCHES</div> <p>A switch control console shall be provided in the headliner above the driver. This console shall separate the emergency / auxiliary electrical functions from the regular chassis functions. A minimum of ten (10) rocker type switches with integral indicator lights shall be provided, in addition to the Load Manager indicator.</p> <p>A master warning switch shall be provided, which shall allow pre-setting of emergency light switches and shall have a red integral indicator light. Next to the master switch, a total of eight (8) load manageable emergency switches shall be provided. The last remaining switch shall be a ground light switch. All switches, (other than the master switch), shall have switch function labeling and an amber integral indicator light.</p> <div> <div>CAB INTERIOR LIGHTING</div> <p>Four (4) Whelen # 60CREGCS, 6" round, interior LED combination red/white dome lights shall be furnished in the cab, two (2) in the forward section and two (2) in the rear crew section. Each dome light shall have individual switches to control the red or white LED's. Each dome light shall also activate when the respective, adjacent cab door is opened.</p> <div> <div>"DO NOT MOVE APPARATUS" WARNING LIGHT WITH AUDIBLE ALARM</div> <p>A 1" round, red flashing warning light with an integral audible alarm, shall be functionally located in the cab to signal when an unsafe condition is present such as an open cab door or body compartment door, an extended ladder rack, a deployed stabilizer, an extended light tower or any other device which is opened, extended or deployed which may cause damage to the apparatus if it is moved.</p> <p>This light shall be activated through the parking brake switch to signal when the parking brake is released. This light shall be labeled "DO NOT MOVE TRUCK".</p> <div> <div>12 VOLT POWER PORT</div> <p>One (1) 12 volt power port accessory outlets shall be installed in the cab of the truck for the Madison Hose Company's accessory devices. The ports shall be located as directed in the cab for devices such as cellular phones.</p> </div> </div> </div> </div> </div> </div>		
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<div> <div>SPECIFICATIONS FOR ONE (1) 1500 GPM CUSTOM PUMPER</div> <div>Bidder Complies</div> </div>		
	Yes	No
<div> <div>12 VOLT POWER PORT NEAR OFFICER</div> <div> <p>One (1) 12 volt power port accessory outlets shall be installed in the cab of the truck for the Madison Hose Company's accessory devices. The ports shall be located as directed near the officer's seating position for devices such as cellular phones.</p> </div> </div> <div> <div>12 VOLT ACCESSORY CIRCUIT - CAB DASH</div> <div> <p>One (1) dedicated circuit; 12 volt, 40 Amp, power and ground on 3/8 stud and fused at battery shall be provided in the cab dash. The circuit shall be for future installation of radios or accessories.</p> </div> </div> <div> <div>12 VOLT ACCESSORY CIRCUIT - BEHIND OFFICERS SEAT</div> <div> <p>One (1) dedicated circuit; 12 volt, 40 Amp, power and ground on 3/8 stud and fused at battery shall be behind the officer seat. The circuit shall be for future installation of radios or accessories.</p> </div> </div> <div> <div>12 VOLT ACCESSORY CIRCUIT - CREW CAB AREA</div> <div> <p>A dedicated 12 volt power and ground circuit shall be provided in the rear crew area as required. The circuit shall be for future installation of radios or accessories.</p> </div> </div> <div> <div>FEDERAL SIGNAL DUAL CAMERA SYSTEM</div> <div> <p>A Federal Signal model # CAMSET70-NTSC-4B rear vision camera system shall be provided to allow the driver to visually see the rear of the apparatus while in the cab. The system shall include a Federal 7.0" flat panel LCD color monitor mounted adjacent to the driver and a Federal rear vision color camera that shall be mounted at the rear of the vehicle. The system shall also feature a microphone on the camera and speaker built into the monitor.</p> <p>In addition to the rear vision camera, a Federal model# CAMCCD-SIDENTSC side mounted camera shall be mounted on the officer side of the cab.</p> <p>The cameras shall be wired as follows:</p> <ul style="list-style-type: none"> • The side vision camera shall automatically activate when the officer side turn signal is activated. • The rear vision camera shall automatically activate when the chassis transmission is placed in reverse. <p>The monitor for the rear vision system shall be mounted ceiling of the cab in easy view of the driver.</p> </div> </div> <div> <div>HEADLIGHTS CLUSTER</div> <div> <p>Two (2) quad, halogen headlight modules with a bright finish bezel shall be furnished, one (1) each side, on the front of the cab. Each head light module shall incorporate an individual low beam and a high beam headlight. High beam actuation shall be controlled on the turn signal lever.</p> </div> </div> <div> <div>DAYTIME RUNNING LIGHTS</div> <div> <p>The chassis head lights shall have integrated circuitry to actuate the low beam headlights at a maximum of 80 percent of capacity whenever the chassis engine is running.</p> <p>The daytime running lights shall be interlocked with the parking brake.</p> </div> </div>		
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<div> <div>SPECIFICATIONS FOR ONE (1) 1500 GPM CUSTOM PUMPER</div> </div>	Bidder Complies	
	Yes	No
<div> <div>UPPER LIGHT MODULE</div> <p>Two (2) Whelen M6* super LED light heads shall be provided, one (1) in each side dual light module, above the headlights, in matching chrome plated bezels.</p> <p>Each light head shall be equipped with red LED's and a colored lens.</p> <p>An individual control switch shall be provided on the cab switch console, which shall be wired through the load management system to prevent excessive amperage draw.</p> <p>The lights noted above shall be provided in addition to the NFPA required, minimum optical warning light package.</p> <p>The NFPA required, Zone "A" lower warning lights shall be incorporated into each side dual light module noted above.</p> <div>ARROW TURN SIGNALS</div> <p>Two (2) Whelen M6T arrow shaped, amber LED turn signals shall be provided in chrome plated housings, mounted one (1) each side between the windshield and the dual light modules.</p> <div>DOT MARKER LIGHTS AND REFLECTORS</div> <p>Five (5) DOT approved Whelen (or equal) Light Emitting Diode (LED) cab marker lamps shall mounted on the top front edge of the cab roof.</p> <p>Amber LED marker lights with integral reflectors shall be provided on the side of the cab adjacent to the driver's door, one (1) each side.</p> <p>Truck-Lite Model # 18 red LED marker lights with integral reflectors shall be provided at the lower side rear, one (1) each side.</p> <p>Truck-Lite # 60115Y yellow LED side marker and turn lights shall be provided on the apparatus lower side, forward of rear axle, one (1) each side.</p> <p>Truck-Lite Model #19 red LED clearance lights shall be provided on the apparatus rear upper, one (1) each side at the outermost practical location.</p> <p>Truck-Lite Model # 33740R LED 3-lamp identification bar will be provided on the apparatus rear center. The lights shall be red in color.</p> <p>Truck-Lite # 98034Y yellow reflectors shall be provided on the apparatus body lower side, as far forward and low as practical, one (1) each side if the apparatus is 30' long or longer.</p> <p>Truck-Lite # 98034R red reflectors shall be provided on the apparatus rear, one (1) each side at the outermost practical location.</p> <div>LED LICENSE PLATE LIGHTS - REAR</div> <p>Two (2) Whelen model # 0AC0EDCR LED license plate lights shall be provided above the mounting position of the license plate. The lights shall be clear in color and shall have a chrome finish. They shall be mounted 1-2" high above the license plate and spaced apart 3" off center.</p> <div>TAIL, STOP, TURN AND BACK-UP LIGHTS</div> <p>Two (2) Whelen 600 series, 4-1/8" x 6-1/2", LED red combination tail and stop lights, shall be mounted one each side at the rear of the body.</p> </div>		
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<div> <div>SPECIFICATIONS FOR ONE (1) 1500 GPM CUSTOM PUMPER</div> </div>	Bidder Complies	
	Yes	No
<p>Two (2) Whelen 600 series, 4-1/8" x 6-1/2", LED amber arrow turn signal lights, shall be mounted one each side, on a vertical plane with the tail/stop lights.</p> <p>Two (2) Whelen 600 series, 4-1/8" x 6-1/2", LED white back-up lights, shall be mounted one each side on a vertical plane with the turn/tail/stop signals. These lights shall activate when the transmission is placed in reverse gear.</p> <p>Two (2) Whelen PLAST4V mounting flanges, installed one (1) on each side, shall be provided to mount the lights described above in one common mounting flange. The fourth opening shall be for the lower rear warning lights.</p> <p>The lights shall be mounted in order, from top to bottom, as described above.</p> <p><u>CAB STEP LIGHTS</u></p> <p>Chrome plated Whelen model # 0AC0EDCR, shielded LED chassis step lights shall be provided and controlled with marker light actuation. Step lights shall be located to properly illuminate all chassis access steps and walkway areas.</p> <p><u>BODY STEP LIGHTS</u></p> <p>Chrome plated Whelen model # 0AC0EDCR, shielded LED body step lights shall be provided and controlled with marker light actuation. Step lights shall be located to properly illuminate all body access steps and walkway areas.</p> <p><u>SCENE LIGHTS - BEHIND FRONT CAB DOORS</u></p> <p>Two (2) Whelen Pioneer model # PFA1 recessed lights shall be installed one on each side of the cab, directly behind the front cab entrance door using the Whelen # PBA103 recessed bracket.</p> <p>Each lamp head shall have two (2) dual stacked white LED modules and shall draw 6 amps and generate 6,000 lumens.</p> <p>Lights shall be wired through the load management system.</p> <p><u>CAB DOOR LIGHT SWITCHING - CAB</u></p> <p>Two (2) switches shall be provided in the cab warning light switch console to turn the lights at the cab doors on and off. One (1) switch shall control the driver side light and one (1) switch shall control the officer side light.</p> <p><u>GROUND LIGHTS - CAB</u></p> <p>One (1) Amdor Luma Bar H2O LED 20" ground light shall be provided under each side cab door entrance step, four (4) total. The ground lights shall turn on automatically with each respective door jamb switch and also by a master ground light switch in the warning light switch console.</p> <p>Each light shall illuminate an area at a minimum 30" outward from the edge of the vehicle.</p> <p><u>GROUND LIGHTS - PUMP PANEL</u></p> <p>One (1) Amdor Luma Bar H2O LED 20" ground light shall be provided under each side pump panel running board, two (2). The ground lights shall be activated by a master ground light switch in the cab and shall be wired through the load management system.</p> <p><u>GROUND LIGHTS - MIDSHIP</u></p>		
<div>MADISON HOSE COMPANY # 1</div>		

<div> <div>SPECIFICATIONS FOR ONE (1) 1500 GPM CUSTOM PUMPER</div> </div>	Bidder Complies	
	Yes	No
<p>One (1) Amdor Luma Bar H2O LED 20" ground light shall be provided under each midship compartment, total of two (2). The ground lights shall be activated by a master ground light switch in the cab and shall be wired through the load management system.</p> <p><u>GROUND LIGHTS - REAR</u></p> <p>One (1) Amdor Luma Bar H2O LED 20" ground light shall be provided under each rear body corner, two (2) total. The ground lights shall be activated by a master ground light switch in the cab and shall be wired through the load management system.</p> <p><u>GROUND LIGHT SWITCHING</u></p> <p>The cab and body ground lights shall be equipped with an activation switch in the cab.</p> <p><u>ROOF MOUNT 150W LED BROW LIGHTS - ABOVE WINDSHIELD</u></p> <p>Two (2) Whelen Pioneer Plus #PFP2 super LED roof mount lights shall be provided and installed. The mounting bracket shall attach to the lamp head and be machined to conform to the roof radius.</p> <p>Each lamp head shall have two (2) dual stacked white LED modules and shall draw 12 amps and generate 14,000 lumens. Each lamp head shall incorporate an adjustable downward angle to maximize the light effectiveness.</p> <p>The lamp head and brackets be powder coated black.</p> <p>The Whelen brow mounted flood lights shall be located one (1) each side above the windshield.</p> <p>Lights shall be wired through the load management system.</p> <p><u>LIGHT(S) ABOVE WINDSHIELD SWITCHING - CAB</u></p> <p>A switch shall be provided in the cab warning light switch console to turn the light above windshield on and off.</p> <p><u>12 VOLT BODY ELECTRICAL SYSTEM</u></p> <p>All electrical lines in the body shall be protected by automatic circuit breakers, conveniently located to permit ease of service. Flashers, heavy solenoids and other major electrical controls shall be located in a central area near the circuit breakers.</p> <p>All lines shall be color and function coded every 3", easy to identify, oversized for the intended loads and installed in accordance with a detailed diagram. A complete wiring diagram shall be supplied with the apparatus.</p> <p>Wiring shall be carefully protected from weather elements and snagging. Heavy duty loom shall be used for the entire length. Grommets shall be utilized where wiring passes through panels.</p> <p>In order to minimize the risk of heat damage, wires run in the engine compartment area shall be carefully installed and suitably protected by the installation of heat resistant shielded loom.</p> <p>All electrical equipment shall be installed to conform to the latest federal standards as outlined in NFPA 1901.</p> <p><u>BODY ELECTRICAL JUNCTION COMPARTMENT</u></p>		
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<div> <div>SPECIFICATIONS FOR ONE (1) 1500 GPM CUSTOM PUMPER</div> </div>	Bidder Complies	
	Yes	No
<p>A weather resistant electric junction compartment shall be provided within the body or pump enclosure, depending on vehicle configuration. This compartment shall provide an easily accessible enclosure to house all of the body wiring junction points, terminal strips, solenoids, etc. The design of this compartment shall not decrease the storage capacity area of the compartment or area in which it is located. A removable panel shall be provided for access to this compartment.</p> <p><u>PUMP ENCLOSURE WORK LIGHTS</u></p> <p>Two (2) Peterson model #M391 lights shall be provided inside the pump enclosure providing a minimum of 20 candlepower illumination. Each light shall have their own independent switch incorporated into the light head.</p> <p><u>ENGINE COMPARTMENT WORK LIGHTS</u></p> <p>Two (2) Peterson model #M391 lights shall be provided inside the engine enclosure that will provide a minimum of 20 candlepower illumination. Each light shall have their own independent switch incorporated into the light head.</p> <p><u>AMDOR LUMA BAR COMPARTMENT LIGHTS - LED</u></p> <p>Each individual, equipment storage compartment shall be equipped with the AMDOR Luma Bar LED light fixture mounted one each side of the forward (and rear) vertical door frame.</p> <p><u>DRIVER SIDE ROOF COMPARTMENT LIGHTING</u></p> <p>Three (3) Amdor Luma Bar LED strip compartment lights shall be provided, to ensure proper compartment illumination. The lights shall be mounted underneath the roof compartment door opening and shall be activated with a magnetic door switch that shall be connected to the door ajar warning circuit.</p> <p><u>OFFICER SIDE ROOF COMPARTMENT LIGHTING</u></p> <p>Three (3) Amdor Luma Bar LED strip compartment lights shall be provided, to ensure proper compartment illumination. The lights shall be mounted underneath the roof compartment door opening and shall be activated with a magnetic door switch that shall be connected to the door ajar warning circuit.</p> <p><u>NFPA AUDIBLE AND LIGHTING WARNING PACKAGE</u></p> <p>The following warning light package shall include all of the minimum warning light and actuation requirements for the current revision of the NFPA 1901 Fire Apparatus Standard. The lighting as specified shall meet the requirements for both "Clearing Right of Way" and "Blocking Right of Way" which includes disabling all white warning lights when the apparatus is in "Blocking Right of Way" mode.</p> <p><u>LIGHT PACKAGE ACTUATION CONTROLS</u></p> <p>The entire warning light package shall be actuated with a single warning light switch located on the cab switch panel. The wiring for the warning light package shall engage all of the lights required for "Clearing Right of Way" mode when the vehicle parking brake is not engaged. An automatic control system shall be provided to switch the warning lights to the "Blocking Right of Way" mode when the vehicle parking brake is engaged.</p> <p><u>WARNING LIGHT FLASH PATTERN</u></p> <p>All of the perimeter warning lights shall be set to an NFPA compliant flash pattern by the apparatus manufacturer.</p>		
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<div> <div>SPECIFICATIONS FOR ONE (1) 1500 GPM CUSTOM PUMPER</div> </div>	Bidder Complies	
	Yes	No
<div> <div> <div>WARNING LIGHT SYNCHRONIZATION</div> <div> <p>The perimeter warning lights shall be synchronized so the lights shall flash in a consistent alternating pattern.</p> <p>The following lights shall be synchronized:</p> </div> <div> <div>NFPA ZONE A, UPPER</div> <div> <p>Two (2) Whelen "Mini Edge Freedom", 28.25" LED cab roof warning light bars shall be furnished and rigidly mounted on top of the cab roof.</p> <p>One (1) Whelen "Edge Freedom", 93" LED, Model # # FNVLED cab roof warning light bar shall be furnished and rigidly mounted on top of the cab roof.</p> <p>The light bars shall be equipped with the following:</p> <div> <div>Driver & Officer side light bars:</div> <ul style="list-style-type: none"> • Clear Lenses • Two Corner Red Linear LED's • One White Front Linear LED • One Red Front Linear LED <div>Center light bar shall be equipped with the following:</div> <ul style="list-style-type: none"> • Clear Lenses • Two Front Corner Red Linear LED's • Four Red Forward Facing Linear LED's • Two Blue Forward Facing Linear LED's • Two White Forward Facing Linear LED's • Two Red End Linear LED's. <p>If equipped, the forward facing white lights shall be automatically disabled for the "Blocking Right of Way" mode.</p> </div> <div> <div>NFPA ZONE C, UPPER</div> <div> <p>Two (2) Whelen 90**5F*R, 900 super LED light heads shall be furnished and mounted one (1) each side on the upper rear face of the body, facing rear.</p> <p>Each light head shall be equipped with red LED's and a colored lens.</p> <p>The lights shall be installed with a chrome plated mounting flange.</p> </div> <div> <div>NFPA ZONES B & D REAR, UPPER</div> <div> <p>Two (2) Whelen 90**5F*R, 900 super LED light heads shall be furnished and mounted one (1) each side on the upper side face, towards the rear of the body, facing to each side of the unit.</p> <p>Each light head shall be equipped with red LED's and a colored lens.</p> <p>The lights shall be installed with a chrome plated mounting flange.</p> </div> </div> </div> </div> </div> </div></div>		
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SPECIFICATIONS FOR ONE (1) 1500 GPM CUSTOM PUMPER	Bidder Complies	
	Yes	No
<p><u>NFPA ZONES B & D FRONT, UPPER</u></p> <p>Two (2) Whelen 90**5F*R, 900 super LED light heads shall be furnished and mounted one (1) each side on the upper side face, towards the front of the body, facing to each side of the unit.</p> <p>Each light head shall be equipped with red LED's and a colored lens.</p> <p>The lights shall be installed with a chrome plated mounting flange.</p> <p><u>NFPA ZONE A, LOWER</u></p> <p>Two (2) Whelen 60*02F*R 600 super LED light heads shall be provided and installed one (1) each side.</p> <p>Each light head shall be equipped with red LED's and a colored lens.</p> <p>The lights shall be installed with a chrome plated mounting flange.</p> <p><u>A-LOWER FRONT MOUNTING, CUSTOM CHASSIS</u></p> <p>The lower Zone A warning lights shall be mounted in the custom chassis headlight bezels.</p> <p><u>NFPA ZONE C, LOWER</u></p> <p>Two (2) Whelen 60*02F*R 600 super LED light heads shall be provided and installed one (1) each side directly below the DOT stop, tail, turn and backup lights.</p> <p>Each light head shall be equipped with red LED's and a colored lens.</p> <p>The lights shall be installed with a chrome plated mounting flange.</p> <p><u>NFPA ZONES B & D FRONT, LOWER</u></p> <p>Two (2) Whelen 60*02F*R 600 super LED light heads shall be provided and installed one (1) each side.</p> <p>Each light head shall be equipped with red LED's and a colored lens.</p> <p>The lights shall be installed with a chrome plated mounting flange.</p> <p><u>B/D-LOWER FRONT MOUNTING, CUSTOM CHASSIS</u></p> <p>The lower Zone B & D warning lights shall be mounted on the sides of the custom chassis front bumper.</p> <p><u>NFPA ZONES B & D MIDSHIP, LOWER</u></p> <p>Two (2) Whelen 60*02F*R 600 super LED light heads shall be provided and installed one (1) each side.</p> <p>Each light head shall be equipped with red LED's and a colored lens.</p> <p>The lights shall be installed with a chrome plated mounting flange.</p>		
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<div> <div>SPECIFICATIONS FOR ONE (1) 1500 GPM CUSTOM PUMPER</div> </div>	Bidder Complies	
	Yes	No
<div> <div><u>NFPA ZONES B & D REAR, LOWER</u></div> <div> <p>Two (2) Whelen 60*02F*R 600 super LED light heads shall be provided and installed one (1) each side.</p> <p>Each light head shall be equipped with red LED's and a colored lens.</p> <p>The lights shall be installed with a chrome plated mounting flange.</p> </div> <div><u>WARNING LIGHT SYSTEM CERTIFICATION</u></div> <div> <p>The warning light systems specified above shall not exceed a combined total amperage draw of 45 AMPS with all lights activated in either the "Clearing Right of Way" or the "Blocking Right of Way" mode.</p> <p>The warning light systems shall be certified by the light system manufacturers, to meet all of the requirements in the current revision of the NFPA 1901 Fire Apparatus Standard as noted in the General Requirements section of these specifications. The NFPA required "Certificate of Compliance" shall be provided with the completed apparatus.</p> </div> <div><u>TRAFFIC ADVISER WARNING LIGHT</u></div> <div> <p>One (1) Whelen LED "Traffic Advisor", model TAM85 46", rear directional light shall be installed on the vertical rear surface of the body. The light shall be equipped with eight (8) lamps. The directional light shall be activated by a control module. The control module shall be conveniently located near the driver's position. The rear directional light shall be wired through the load management system of the unit.</p> </div> <div><u>ELECTRIC HORNS</u></div> <div> <p>Dual electric horns activated by the steering wheel horn button shall be furnished.</p> </div> <div><u>BACK-UP ALARM</u></div> <div> <p>A Code 3, model # D450C, 87dBA back-up alarm, shall be provided and installed at the rear of the apparatus under the tailboard. The back-up alarm shall activate automatically when the transmission is placed in reverse gear and the ignition is "on".</p> </div> <div><u>AIR HORNS</u></div> <div> <p>Two (2) chrome plated air horns shall be at the front of the vehicle. The air horns shall be mounted in full compliance with NFPA-1901. The supply lines shall be dual 1/4" lines with equal distance from each horn.</p> <p>Both air horns shall be recessed in the front bumper.</p> <p>The air horns shall be controlled by dual ceiling mounted lanyard cables, located in the center of the cab.</p> </div> <div><u>ELECTRONIC SIREN AND SPEAKER</u></div> <div> <p>One (1) Whelen # 295HFS2, 100 watt electronic siren shall be provided featuring: flush mount remote control head recessed in center dash panel as space allows, "Si-Test" self diagnostic feature, six (6) function siren, radio repeat and public address.</p> <p>The electronic siren and speaker shall meet the NFPA required SAE certification to ensure compatibility between the siren and speaker.</p> </div> </div>		
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<div> <div>SPECIFICATIONS FOR ONE (1) 1500 GPM CUSTOM PUMPER</div> </div>	Bidder Complies	
	Yes	No
<div> <div> <p>One (1) Whelen, model # SA122FMP polished aluminum siren speakers shall be provided, recessed in the front bumper and wired to the electronic siren.</p> <p><u>FEDERAL Q2B MECHANICAL SIREN</u></p> <p>One (1) Federal Model #Q2B mechanical siren shall be provided to provide audible warning.</p> <p>The Q2B siren shall be pedestal mounted on top of the extended bumper on the driver's side. The siren shall be equipped with a Federal model #P, chrome housing and pedestal.</p> <p>Two (2) floor mounted foot switches shall be provided, one (1) for the officer and one (1) for the driver. A siren brake button shall be provided near the driver's position.</p> <p><u>PUMP</u></p> <ul style="list-style-type: none"> • HALE • 1500 G.P.M. • SINGLE STAGE <p>The pump must deliver the percentage of rated capacity at the pressure listed below:</p> <ul style="list-style-type: none"> • 100% of rated capacity at 150 P.S.I. net pump pressure • 100% of rated capacity at 165 P.S.I. net pump pressure • 70% of rated capacity at 200 P.S.I. net pump pressure • 50% of rated capacity at 250 P.S.I. net pump pressure. <p><u>PUMP ASSEMBLY</u></p> <p>The pump shall be of a size and design to mount on the chassis rails of commercial and custom truck chassis, and have the capacity of 1500 gallons per minute (U.S. GPM), NFPA-1901 rated performance.</p> <p><u>PUMP CONSTRUCTION</u></p> <p>The entire pump shall be manufactured and tested at the pump manufacturer's factory.</p> <p>The pump shall be driven by a drive line from the truck transmission. The engine shall provide sufficient horsepower and RPM to enable pump to meet and exceed its rated performance.</p> <p>The entire pump, both suction and discharge passages, shall be hydrostatically tested to a pressure of 600 PSI (41.3 BAR). The pump shall be fully tested at the pump manufacturer's factory to the performance spots as outlined by the latest NFPA Standard 1901. Pump shall be free from objectionable pulsation and vibration. This model shall include the Custom Rams Horn suction manifold.</p> <p>The pump body and related parts shall be of fine grain alloy cast iron, with a minimum tensile strength of 30,000 PSI (2069 BAR). All moving parts in contact with water shall be of high quality bronze or stainless steel. Pumps utilizing castings made of lower tensile strength cast iron are not acceptable.</p> <p>Pump body shall be vertically split, on a single plane, for easy removal of impeller assembly, including clearance rings.</p> <p><u>PUMP SHAFT</u></p> <p>Pump shaft to be rigidly supported by two bearings for minimum deflection. The bearings shall be heavy-duty, deep groove ball bearings in the gearbox and they shall be splash lubricated.</p> </div> </div>		
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	Yes	No
<p>The pump shaft shall be heat-treated, electric furnace, corrosion resistant, stainless steel. Pump shaft must be sealed with double lip oil seal to keep road dirt and water out of gearbox.</p> <p><u>PUMP IMPELLER</u></p> <p>Pump impeller shall be hard, fine grain bronze of the mixed flow design; accurately machined, hand-ground and individually balanced. The vanes of the impeller intake eye shall be hand-ground and polished to a sharp edge, and be of sufficient size and design to provide ample reserve capacity utilizing minimum horsepower.</p> <p>Impeller clearance rings shall be bronze, easily renewable without replacing impellers or pump volute body.</p> <p><u>MECHANICAL SHAFT SEAL</u></p> <p>The midship pump shall be equipped with a high quality, spring loaded, self-adjusting mechanical seal capable of providing a positive seal to atmosphere under all pumping conditions. This positive seal to atmosphere must be achievable under vacuum conditions up to 26 Hg (draft) or positive suction pressures up to 250 PSI.</p> <p>The mechanical seal assembly shall be 2 inches in diameter and consists of a carbon sealing ring, stainless steel coil spring, Viton rubber boot, and a tungsten carbide seat with a Teflon backup seal provided.</p> <p>Only one (1) mechanical seal shall be required, located on the suction side of the pump and be designed to be compatible with a one piece pump shaft. A continuous cooling flow of water from the pump shall be directed through the seal chamber when the pump is in operation.</p> <p><u>GEARBOX</u></p> <p>The drive unit shall be completely assembled and tested at the pump manufacturer's factory.</p> <p>The drive unit shall be of sufficient size to withstand up to 16,000 lbs. ft. of torque of the engine in both road and pump operating conditions. The drive unit shall be designed of ample capacity for lubrication reserve and to maintain the proper operating temperature.</p> <p>The gearbox drive shafts shall be of heat treated chrome nickel steel and at least 2-3/4 inches in diameter on both the input and output drive shafts. They shall withstand the full torque of the engine in both road and pump operating conditions.</p> <p>All gears; drive and pump, shall be of the highest quality electric furnace chrome nickel steel. Bores shall be ground to size and teeth integrated, crown-shaved and hardened, to give an extremely accurate gear for long life, smooth, quiet running and higher load carrying capability. An accurately cut spur design shall be provided to eliminate all possible end thrust.</p> <p><u>PUMP RATIO</u></p> <p>The pump ratio shall be selected by the apparatus manufacturer to give maximum performance with the engine and transmission selected.</p> <p>The manufacturer shall supply at time of delivery copies of the pump manufacturer's certification of hydrostatic testing, the engine manufacturer's current certified brake horsepower curve.</p> <p><u>PUMP SHIFT CONTROL</u></p> <p>The drive unit shall be equipped with a power shift. The shifting mechanism shall be a heat treated, hard anodized aluminum power cylinder with stainless steel shaft. An air operated in-cab</p>		
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	Yes	No
<p>control for rapid shift shall be provided that locks in road or pump, with a neutral position for use when manual override is required.</p> <p><u>MAIN PUMP - PUMP SHIFT INDICATOR LIGHTS</u></p> <p>Three (3) green warning lights shall be provided to indicate to the operator(s) when the pump has completed the shift for Road to Pump position. Two (2) green lights to be located in the truck driving compartment and one (1) green light on pump operator's panel adjacent to the throttle control. All lights to have appropriate identification/instruction plates.</p> <p><u>TRANSMISSION LOCK</u></p> <p>The automatic transmission furnished in the chassis shall have a lock-up assembly which brings the transmission to direct drive and prevents the transmission from shifting gears while in the pumping mode.</p> <p><u>BRAKING SYSTEM</u></p> <p>A positive braking system shall be provided to prevent vehicle movement during pumping operations. The air brakes furnished must satisfy this requirement.</p> <p><u>MAIN PUMP MOUNTS</u></p> <p>Extra heavy duty pump mounting brackets shall be furnished. These shall be bolted to the frame rails in such a position to perfectly align the pump so that the angular velocity of the drive line joints shall be the same on each end of the drive shaft. This shall assure full capacity performance with a minimum of vibration. Mounting hardware shall utilize Grade 8 bolts.</p> <p>Pumps which are not mounted directly to the frame will not be considered. Under no circumstance shall the pump function as a frame cross member.</p> <p><u>PUMP MANIFOLDS</u></p> <p>A custom made suction and discharge manifold shall be constructed from stainless steel and/or flexible tubing. The manifold shall be designed to provide maximum efficiency for the suction inlets and the discharges. NO EXCEPTIONS.</p> <p><u>FIRE RESEARCH "IN-CONTROL" PRESSURE GOVERNOR</u></p> <p>The apparatus shall be equipped with a Fire Research InControl series TGA300 pressure governor and monitoring display kit shall be installed. The kit shall include a control module, intake pressure sensor, discharge pressure sensor, and cables. The control module case shall be waterproof and have dimensions not to exceed 5 1/2" high by 10 1/2" wide by 2" deep. Inputs for monitored information shall be from a J1939 databus or independent sensors. Outputs for engine control shall be on the J1939 databus or engine specific wiring.</p> <p>The following continuous displays shall be provided:</p> <ul style="list-style-type: none"> • Pump discharge; shown with four daylight bright LED digits more than 1/2" high • Pump Intake; shown with four daylight bright LED digits more than 1/2" high • Pressure / RPM setting; shown on a dot matrix message display • Pressure and RPM operating mode LEDs • Throttle ready LED • Engine RPM; shown with four daylight bright LED digits more than 1/2" high • Check engine and stop engine warning LEDs • Oil pressure; shown on a dual color (green/red) LED bar graph display • Engine coolant temperature; shown on a dual color (green/red) LED bar graph display 		
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	Yes	No
<div> <ul style="list-style-type: none"> • Transmission Temperature: shown on a dual color (green/red) LED bar graph display • Battery voltage; shown on a dual color (green/red) LED bar graph display. • The dot-matrix message display shall show diagnostic and warning messages as they occur. It shall show monitored apparatus information, stored data, and program options when selected by the operator. All LED intensity shall be automatically adjusted for day and night time operation. <p>The program shall store the accumulated operating hours for the pump and engine to be displayed with the push of a button. It shall monitor inputs and support audible and visual warning alarms for the following conditions:</p> <ul style="list-style-type: none"> • High Battery Voltage • Low Battery Voltage (Engine Off) • Low Battery Voltage (Engine Running) • High Transmission Temperature • Low Engine Oil Pressure • High Engine Coolant Temperature • Out of Water (visual alarm only) • No Engine Response. (visual alarm only) <p>The program features shall be accessed via push buttons located on the front of the control panel. There shall be an USB port located at the rear of the control module to upload future firmware enhancements.</p> <p>Inputs to the control panel from the pump discharge and intake pressure sensors shall be electrical. The discharge pressure display shall show pressures from 0 to 600 psi. The intake pressure display shall show pressures from -30 in. Hg to 600 psi.</p> <p>The governor shall operate in two control modes, pressure and RPM. No discharge pressure or engine RPM variation shall occur when switching between modes. A throttle ready LED shall light when the interlock signal is recognized. The governor shall start in pressure mode and set the engine RPM to idle. In pressure mode the governor shall automatically regulate the discharge pressure at the level set by the operator. In RPM mode the governor shall maintain the engine RPM at the level set by the operator except in the event of a discharge pressure increase. The governor shall limit a discharge pressure increase in RPM mode to a maximum of 30 psi. Other safety features shall include recognition of no water conditions with an automatic programmed response and a push button to return the engine to idle.</p> <p>The pressure governor, monitoring and master pressure display shall be programmed to interface with a specific engine.</p> <p><u>INTAKE RELIEF VALVE</u></p> <p>An Akron Model 59 intake relief valve system shall be plumbed on the suction side of the pump to comply fully with NFPA-1901 requirements. Excess pressures shall be plumbed to discharge water under the pump enclosure away from the pump operator.</p> <p><u>PUMP CERTIFICATION</u></p> <p>The pump shall be third party performance tested to meet the requirements of NFPA-1901. To ensure top quality and integrity, the test company shall be Underwriters Laboratories (UL). NO EXCEPTIONS!</p> <p><u>TRIDENT "AUTOMATIC" AIR PRIMING SYSTEM</u></p> <p>A Trident automatic air operated priming system shall be installed. The unit shall be brass and stainless steel construction, no aluminum shall be used. The priming system shall be fully</p> </div>		
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	Yes	No
<p>compliant of applicable NFPA standards for vertical lift. Noise level during operation of the primer shall not exceed 75Db.</p> <p>The 12 volt primer control shall be an "automatic" type, with a pump panel three-way switch to operate an air solenoid valve.</p> <p>Automatic Priming switch shall have three positions:</p> <ul style="list-style-type: none"> • "Prime"- the lower position shall be a momentary "push to prime". The "Prime" position also allows the operator to "ramp" test the primer without the fire pump being engaged. • "Off" - center position. • "Auto-Prime" - in the upper position, a "green" LED pilot light shall be illuminated when the switch is in the auto-prime position. Auto-Prime shall operate automatically when the pump pressure drops 20 PSIG. The primer shall shut "off" automatically when the pump pressure is re-established and exceeds 20 PSIG. <p>This priming system shall be capable of priming at up to four (4) locations.</p> <p><u>FRONT SUCTION REMOTE PRIMING VALVE</u></p> <p>An additional primer control valve shall be furnished to prime the front suction. The Trident Emergency products RPV (remote priming valve) shall activate using the same air that powers the AirPrime™ system when the coinciding panel valve is depressed.</p> <p><u>MASTER DRAIN VALVE</u></p> <p>A rotary type, 12 port master drain valve shall be provided and controlled at the lower portion of the side pump panel. The valve shall be located in pump compartment lower than the main body and connected in such a manner as to allow complete water drainage of the pump body and all required accessories. Water shall be drained below the apparatus body and away from the pump operator.</p> <p><u>INDIVIDUAL BLEEDERS AND DRAINS</u></p> <p>All lines shall drain through the master drain valve or shall be equipped with individual drain valves, easily accessible and labeled.</p> <p>One (1) individual "Innovative Control" lift up drain valve shall be furnished for each 1-1/2" or larger discharge port and each 2-1/2" gated auxiliary suction.</p> <p>Drain/bleeder valves shall be located at the bottom of the side pump module panels.</p> <p>All drains and bleeders shall discharge below the running boards.</p> <p><u>SYNFLEX SUCTION, DISCHARGE, PRESSURE AND CONTROL LINES</u></p> <p>Small lines within the pump enclosure shall be constructed from Synflex hose. Uses include, but are not limited to such lines as priming control, gauge lines, drain lines, air control valves, pump shift, supplemental cooling, foam flush and air bleeder valves.</p> <p><u>HALE ANODE BLOCKS - ALLOY - 2 TOTAL</u></p> <p>Two (2) Hale Alloy Anode blocks shall be provided and located one (1) on the suction side and one (1) on the discharge side of the pump to protect the pump from corrosion.</p>		
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	Yes	No
<p>The Anodes shall be painted Safety Yellow for identification purposes.</p> <p><u>PUMP MODULE</u></p> <p>The pump module shall be an integral part of the fire body. The pump operator's panel shall be installed in the driver side front body compartment. The suction/discharge panel shall be installed beneath the cab extension. The pump control panel shall be enclosed by the body doors providing a rescue style appearance with all of the compartment doors closed.</p> <p>This design style shall provide a reduced wheelbase pumper for improved handling and maneuverability. Pump modules that are a separate module forward of the body shall not be excepted. NO EXCEPTIONS!</p> <p><u>PUMP PANEL ORIENTATION</u></p> <p>The pump operator's panel shall be a traditional "side-mount" style configuration with the operator located on the driver side of the apparatus, operating from the ground near the front portion of the body. The panel shall be a vertical orientation in the front side compartment.</p> <p><u>SUCTION INLETS</u></p> <p>Two (2) 6" N.S.T. suction inlets shall be provided, one on the driver side and one on the officer side pump panel. A removable strainer shall be installed on each inlet.</p> <p><u>INTAKE BUTTERFLY VALVE - ELECTRIC OPERATED - DRIVER SIDE</u></p> <p>The fire pump shall be fitted with a Hale Master Intake Valve (MIV), on the driver side main suction inlet. The valve shall be mounted between the suction tube extension and the suction tube, and shall be recessed behind the operator's panel. The valve body and all related components that are in contact with water shall be manufactured of fine grained, corrosion resistant bronze. The valve shall have a bore of 6.40". The valve shall incorporate a pressure relief valve, set at the pump manufacturer's facility to a rating of 125 PSI. The pressure relief valve shall provide protection for the suction hose even with the valve in the closed position. The valve shall incorporate NFPA-1901 compliant, large diameter hose air bleed valve, controlled at the operator's panel.</p> <p>The valve shall be operated by a twelve (12) volt DC motor, as standard. It shall also incorporate a knob control manual override, mounted at the suction inlet. The electric control shall incorporate a placard with status lights to indicate whether the valve is in the closed, open or throttled position. The valve shall not be able to move from fully open to fully closed in under three (3) seconds, in compliance with NFPA-1901.</p> <p><u>INTAKE BUTTERFLY VALVE - ELECTRIC OPERATED - OFFICER SIDE</u></p> <p>The fire pump shall be fitted with a Hale Master Intake Valve (MIV), on the officer side main suction inlet. The valve shall be mounted between the suction tube extension and the suction tube, and shall be recessed behind the operator's panel. The valve body and all related components that are in contact with water shall be manufactured of fine grained, corrosion resistant bronze. The valve shall have a bore of 6.40". The valve shall incorporate a pressure relief valve, set at the pump manufacturer's facility to a rating of 125 PSI. The pressure relief valve shall provide protection for the suction hose even with the valve in the closed position. The valve shall incorporate NFPA-1901 compliant, large diameter hose air bleed valve, controlled at the operator's panel.</p> <p>The valve shall be operated by a twelve (12) volt DC motor, as standard. It shall also incorporate a knob control manual override, mounted at the suction inlet. The electric control shall incorporate a placard with status lights to indicate whether the valve is in the closed, open or throttled</p>		
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	Yes	No
<p>position. The valve shall not be able to move from fully open to fully closed in under three (3) seconds, in compliance with NFPA-1901.</p> <p><u>PUMP SUCTION ENDS</u></p> <p>The main pump suction inlets shall be furnished with a short suction end, terminating with only the suction threads protruding through the side panel to minimize the distance an exterior appliance protrudes beyond the pump panel.</p> <p>A 6" NST chrome plated long handle pressure vented cap shall be installed on each main inlet of the pump.</p> <p><u>FRONT SUCTION</u></p> <p>A 6" N.S.T. front suction inlet shall be provided at the front of the vehicle, plumbed from the pump.</p> <p>The front inlet shall be located on the officer's side of the apparatus in a cutout well in the front bumper. Gravel plate of the cut out shall be painted job color. The cutout in the bumper shall be proportional the size of the suction diameter.</p> <p>The front suction pipe shall be equipped with a chrome 6" NSTM thread adapter.</p> <p>The front inlet shall be plumbed utilizing 5", schedule 10 stainless steel piping, 45 degree elbows and a limited number of 90 degree sweep elbows in an assembly from the pump to the front of the cab. A manual drain shall be provided ahead of the front wheel and a panel controlled drain shall be provided aft of the front wheel.</p> <p>A minimum of two (2) grooved pipe couplings shall be furnished in this assembly to allow for flex and serviceability.</p> <p><u>BRAY 5" BUTTERFLY VALVE FOR FRONT SUCTION</u></p> <p>The front suction inlet shall be gated with a 5" Bray in-line, full flow butterfly valve, located in the pump compartment.</p> <p>An Akron model 59 inlet relief valve shall be provided as part of the front suction plumbing, situated outboard of the rear suction gate valve.</p> <p><u>BRAY AIR CONTROL VALVE CONTROL FOR FRONT SUCTION</u></p> <p>The front suction valve shall be air operated with a control switch located on the operator's panel with function plate.</p> <p><u>6" NST FRONT SUCTION PRESSURE VENTED CAP</u></p> <p>One (1) 6" NST chrome plated long handle vented caps shall be installed on front suction.</p> <p><u>AUXILIARY SIDE SUCTION</u></p> <p>One (1) 2-1/2" auxiliary suction shall be provided at the officer side pump panel, to the front of the main inlet. The 2-1/2" auxiliary suction shall terminate with a removable strainer, chrome plated 2-1/2" NST female swivel with a chrome plated plug and retaining chain.</p> <p>An EB25, 2 1/2" Elkhart Unibody valve, shall be provided for the right side front auxiliary suction.</p>		
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	Yes	No
<p>The officer front auxiliary suction valve shall be equipped with an Elkhart Model # UBEC1 electric valve control on the operator's panel with function plate. The control shall be equipped with ten (10) LED lights that show the range of the open/close position of the valve. The controller shall have a switch to operate the Preset feature.</p> <p><u>TANK TO PUMP</u></p> <p>Two (2) 4" full flow tank to pump lines shall be piped, one (1) through the front bulkhead of the tank and one (1) through the rear bulkhead, each with a 90 degree elbow down into two (2) individual sumps one (1) at the front of the tank and one (1) at the rear of the tank for maximum flow. These lines shall be plumbed directly into the rear of the pump suction manifold for maximum efficiency.</p> <p>Two (2) 3" full-flow, in-line ball valves and check valves shall be provided to prevent accidental pressurization of the water tank through the pump connection. Connection from valve to tank shall be made using non-collapsible flexible rubber hose.</p> <p>A check valve shall be provided to prevent accidental pressurization of the water tank through the pump connection. Connection from the valve to the tank shall be made by using a non-collapsible flexible rubber hose.</p> <p>Two (2) EB30, 3" Elkhart Unibody valves, shall be provided between the pump suction manifold and the water tank.</p> <p>The tank to pump valves shall be equipped with an Elkhart Model # UBEC1C surface mounted electric valve control on the operator's panel with function plate. The control shall be equipped with ten (10) LED lights that show the range of the open/close position of the valve. The controller shall have a button to operate the Preset feature.</p> <p><u>TANK FILL</u></p> <p>One (1) 2" gated full flow pump to tank refill line controlled at the pump panel shall be provided. A deflector shield inside the tank shall be furnished. Tank fill plumbing shall utilize 2" high pressure hose for tank connection to accommodate flexing between components. NO EXCEPTIONS</p> <p>An EB20, 2" Elkhart Unibody valve, shall be provided between the pump discharge manifold and the water tank.</p> <p>The tank fill valve shall be equipped with an Elkhart Model # UBEC1C surface mounted electric valve control on the operator's panel with function plate. The control shall be equipped with ten (10) LED lights that show the range of the open/close position of the valve. The controller shall have a button to operate the Preset feature.</p> <p><u>DRIVER'S SIDE MAIN DISCHARGE #1</u></p> <p>A discharge shall be provided and located at the driver's side pump panel. The driver's side discharges # 1 shall terminate with NST threads, through the left panel above the main pump intake.</p> <p>The main pump discharge shall be plumbed directly from the pump discharge manifold utilizing direct connect discharge valve flanges.</p> <p>An EB25, 2 1/2" Elkhart Unibody valve, shall be provided for the driver's side # 1 discharge.</p> <p>The discharge valve shall be equipped with a straight 2 1/2" NST adapter that shall be equipped with a 2 1/2" NST, 30-degree, chrome plated elbow.</p>		
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	Yes	No
<p>A 2 1/2" NST chrome plated pressure vented cap shall be installed on driver's side #1 discharge.</p> <p>The driver's side # 1 discharge valve shall be equipped with an Elkhart Model # UBEC1C surface mounted electric valve control on the operator's panel with function plate. The control shall be equipped with ten (10) LED lights that show the range of the open/close position of the valve. The controller shall have a button to operate the Preset feature.</p> <p>The driver's side # 1 discharge shall be equipped with a Class One 2 1/2" pressure gauge which shall contain a vibration dampened internal mechanism. To prevent internal freezing, the stem and Bourdon tube shall be filled with low temperature oil and be sealed from the water system using an isolating diaphragm located in the stem. A bright metal bezel shall be supplied for resistance to corrosion and to protect the lens and case from damage.</p> <p>The pressure gauge shall be illuminated internally using light emitting diodes, which shall be wired through the pump panel light circuit. The gauge face shall be white with black numerals.</p> <p>The color of the illuminated Class One gauge shall be Red.</p> <p><u>OFFICER'S SIDE MAIN DISCHARGE #1</u></p> <p>A discharge shall be provided and located at the officer's side pump panel. The officer's side discharges #1 shall terminate with NST threads, through the officer's side panel above the main pump intake.</p> <p>The main pump discharge shall be plumbed directly from the pump discharge manifold utilizing direct connect discharge valve flanges.</p> <p>An EB25, 2 1/2" Elkhart Unibody valve, shall be provided for the officer's side # 1 discharge.</p> <p>The discharge valve shall be equipped with a straight 2 1/2" NST adapter that shall be equipped with a 2 1/2" NST, 30-degree, chrome plated elbow.</p> <p>A 2 1/2" NST chrome plated pressure vented cap shall be installed on officer's side # 1 discharge.</p> <p>The officer's side # 1 discharge valve shall be equipped with an Elkhart Model # UBEC1C surface mounted electric valve control on the operator's panel with function plate. The control shall be equipped with ten (10) LED lights that show the range of the open/close position of the valve. The controller shall have a button to operate the Preset feature.</p> <p>The officer's side # 1 discharge shall be equipped with a Class One 2 1/2" pressure gauge which shall contain a vibration dampened internal mechanism. To prevent internal freezing, the stem and Bourdon tube shall be filled with low temperature oil and be sealed from the water system using an isolating diaphragm located in the stem. A bright metal bezel shall be supplied for resistance to corrosion and to protect the lens and case from damage.</p> <p>The pressure gauge shall be illuminated internally using light emitting diodes, which shall be wired through the pump panel light circuit. The gauge face shall be white with black numerals.</p> <p>The color of the illuminated Class One gauge shall be Red.</p> <p><u>OFFICER'S SIDE MAIN DISCHARGE #2</u></p> <p>A discharge shall be provided and located at the officer's side pump panel. The officer's side discharges #2 shall terminate with NST threads, through the officer's side panel above the main pump intake.</p>		
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	Yes	No
<p>The main pump discharge shall be plumbed directly from the pump discharge manifold utilizing direct connect discharge valve flanges.</p> <p>An EB40, 4" Elkhart Unibody valve, shall be provided for the officer's side #2 discharge.</p> <p>The discharge valve shall be equipped with a straight 4" NST adapter.</p> <p>A 4" NSTF X 4" Storz Kochek SKE-R 30° adapter with cap shall be provided on the officer's side #2 discharge.</p> <p>The officer's side #2 discharge valve shall be equipped with an Elkhart Model #UBEC1C surface mounted electric valve control on the operator's panel with function plate. The control shall be equipped with ten (10) LED lights that show the range of the open/close position of the valve. The controller shall have a button to operate the Preset feature.</p> <p>The officer's side #2 discharge shall be equipped with a Class One 2 1/2" pressure gauge which shall contain a vibration dampened internal mechanism. To prevent internal freezing, the stem and Bourdon tube shall be filled with low temperature oil and be sealed from the water system using an isolating diaphragm located in the stem. A bright metal bezel shall be supplied for resistance to corrosion and to protect the lens and case from damage.</p> <p>The pressure gauge shall be illuminated internally using light emitting diodes, which shall be wired through the pump panel light circuit. The gauge face shall be white with black numerals.</p> <p>The color of the illuminated Class One gauge shall be Red.</p> <p><u>DRIVER SIDE HOSE BED DISCHARGE</u></p> <p>A 2 1/2" NST rear hose bed discharge shall be plumbed to the upper front body panel, extending into the front of the hose bed.</p> <p>The rear hose bed discharge shall terminate just above the hosebed floor, in the driver side front of the hose bed.</p> <p>The driver side hose bed discharge pipe shall be equipped with a chrome 2 1/2" NSTM thread adapter.</p> <p>The driver side hose bed discharge shall be plumbed utilizing 3" schedule 10 stainless steel piping, 45 degree elbows and a limited number of 90 degree sweep elbows in an assembly from the pump to the rear of the vehicle. A minimum of one (1) grooved pipe coupling shall be furnished in this assembly to allow for flex and serviceability.</p> <p>An EB30, 3" Elkhart Unibody valve, shall be provided for the driver side hose bed discharge.</p> <p>The driver's side hose bed discharge valve shall be equipped with an Elkhart Model #UBEC1C surface mounted electric valve control on the operator's panel with function plate. The control shall be equipped with ten (10) LED lights that show the range of the open/close position of the valve. The controller shall have a button to operate the Preset feature.</p> <p>One (1) 2 1/2" NST chrome plated pressure vented cap shall be installed the driver's side hose bed discharge.</p> <p>The driver side hose bed discharge shall be equipped with a Class One 2 1/2" pressure gauge which shall contain a vibration dampened internal mechanism. To prevent internal freezing, the stem and Bourdon tube shall be filled with low temperature oil and be sealed from the water system using</p>		
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<div> <div>SPECIFICATIONS FOR ONE (1) 1500 GPM CUSTOM PUMPER</div> </div>	Bidder Complies	
	Yes	No
<p>an isolating diaphragm located in the stem. A bright metal bezel shall be supplied for resistance to corrosion and to protect the lens and case from damage.</p> <p>The pressure gauge shall be illuminated internally using light emitting diodes, which shall be wired through the pump panel light circuit. The gauge face shall be white with black numerals.</p> <p>The color of the illuminated Class One gauge shall be Red.</p> <p><u>OFFICER'S SIDE HOSE BED DISCHARGE</u></p> <p>A 2 1/2" NST rear hose bed discharge shall be plumbed to the upper front body panel, extending into the front of the hose bed.</p> <p>The rear hose bed discharge shall terminate just above the hose bed floor, in the officer's side front of the hose bed.</p> <p>The officer's side hose bed discharge pipe shall be equipped with a chrome 2 1/2" NSTM thread adapter.</p> <p>The officer side hose bed discharge shall be plumbed utilizing 3" schedule 10 stainless steel piping, 45 degree elbows and a limited number of 90 degree sweep elbows in an assembly from the pump to the rear of the vehicle.</p> <p>A minimum of one (1) grooved pipe coupling shall be furnished in this assembly to allow for flex and serviceability.</p> <p>An EB30, 3" Elkhart Unibody valve, shall be provided for the officer side hose bed discharge.</p> <p>The officer's side hose bed discharge valve shall be equipped with an Elkhart Model #UBEC1C surface mounted electric valve control on the operator's panel with function plate. The control shall be equipped with ten (10) LED lights that show the range of the open/close position of the valve. The controller shall have a button to operate the Preset feature.</p> <p>One (1) 2 1/2" NST chrome plated pressure vented cap shall be installed the officer's side hose bed discharge.</p> <p>The officer's side hose bed discharge shall be equipped with a Class One 2 1/2" pressure gauge which shall contain a vibration dampened internal mechanism. To prevent internal freezing, the stem and Bourdon tube shall be filled with low temperature oil and be sealed from the water system using an isolating diaphragm located in the stem. A bright metal bezel shall be supplied for resistance to corrosion and to protect the lens and case from damage.</p> <p>The pressure gauge shall be illuminated internally using light emitting diodes, which shall be wired through the pump panel light circuit. The gauge face shall be white with black numerals.</p> <p>The color of the illuminated Class One gauge shall be Red.</p> <p><u>DECK GUN DISCHARGE</u></p> <p>A deck gun discharge shall be plumbed from the pump to an area on top of the vehicle. The deck gun piping shall be firmly supported and braced.</p> <p>The deck gun discharge shall be located in the hosebed area above the pump module on the officer's side of the vehicle. A pedestal type, 1/4" steel plate support assembly shall be provided to stabilize deck gun plumbing below deck gun mount flange.</p> <p>The deck gun discharge pipe shall terminate with 4" NPT threads.</p>		
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<div> <div>SPECIFICATIONS FOR ONE (1) 1500 GPM CUSTOM PUMPER</div> </div>	Bidder Complies	
	Yes	No
<p>To improve the operation range of the deck gun, the discharge pipe shall be outfitted with a TFT (12") Extend-A-Gun, part # XG12**-**. The Extend-A-Gun shall be wired to the hazard light on the cab dash.</p> <p>The deck gun piping shall be designed so the overall height of the deck gun in the mounted/stowed position does not exceed the tallest point on the cab/body.</p> <p>The deck gun discharge shall be plumbed utilizing 4" schedule 10 stainless steel piping, 45 degree elbows and a limited number of 90 degree sweep elbows in an assembly from the pump to the deck gun location.</p> <p>A minimum of one (1) grooved pipe coupling shall be furnished in this assembly to allow for flex and serviceability.</p> <p>An EB40, 4" Elkhart Unibody valve, shall be provided for the deck gun discharge.</p> <p>The deck gun discharge valve shall be equipped with an Elkhart Model #UBEC1C surface mounted electric valve control on the operator's panel with function plate. The control shall be equipped with ten (10) LED lights that show the range of the open/close position of the valve. The controller shall have a button to operate the Preset feature.</p> <p>The deck gun discharge shall be equipped with a Class One 2 1/2" pressure gauge which shall contain a vibration dampened internal mechanism. To prevent internal freezing, the stem and Bourdon tube shall be filled with low temperature oil and be sealed from the water system using an isolating diaphragm located in the stem. A bright metal bezel shall be supplied for resistance to corrosion and to protect the lens and case from damage.</p> <p>The pressure gauge shall be illuminated internally using light emitting diodes, which shall be wired through the pump panel light circuit. The gauge face shall be white with black numerals.</p> <p>The color of the illuminated Class One gauge shall be Red.</p> <p><u>ELKHART MANUAL DECK GUN</u></p> <p>An Elkhart Stinger 2.0 8297 series deck gun shall be supplied and mounted on the deck gun discharge of the unit to provide the maximum travel clearance. The deck gun monitor shall be able to be removed and placed on a ground base to be used away from the apparatus.</p> <p>The deck gun shall come with the following standard components:</p> <ul style="list-style-type: none"> • Upper & Base Unit • Stream Shaper <p><u>ELKHART TOP MOUNT FLANGE ADAPTER</u></p> <p>An Elkhart 4-bolt top mount flange shall be installed on the deck gun discharge to allow the monitor to be disconnected and used with the portable ground base.</p> <p><u>ELKHART MASTER STREAM NOZZLE</u></p> <p>An Elkhart model "X-STREAM" 1250 g.p.m. manual nozzle shall be supplied with the deck gun.</p> <p><u>DECK GUN PAINT</u></p> <p>The deck gun, pipe and flange shall be painted job color PPG # Job Color.</p>		
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<div> <div>SPECIFICATIONS FOR ONE (1) 1500 GPM CUSTOM PUMPER</div> </div>	Bidder Complies	
	Yes	No
<div> <div> <div>FRONT DISCHARGE</div> <div> <p>A 1 1/2" front #1 discharge shall be plumbed to the front bumper of the vehicle.</p> <p>The front #1 discharge shall terminate on the top driver's side of the front bumper extension gravel shield with a chrome 1 1/2" NST chicksan swivel adapter.</p> <p>The front #1 discharge shall be plumbed utilizing 2" schedule 10 stainless steel piping and/or flexible hose, 45 degree elbows and a limited number of 90 degree sweep elbows in an assembly from the pump to the front of the vehicle.</p> <p>A minimum of one (1) grooved pipe coupling shall be furnished in this assembly to allow for flex and serviceability. Automatic discharge drains shall be provided at all low points in the plumbing.</p> <p>An EB20, 2" Elkhart Unibody valve, shall be provided for the front #1 discharge.</p> <p>The front #1 discharge valve shall be equipped with an Elkhart Model #UBEC1C surface mounted electric valve control on the operator's panel with function plate. The control shall be equipped with ten (10) LED lights that show the range of the open/close position of the valve. The controller shall have a button to operate the Preset feature.</p> <p>A 1 1/2" NST chrome plated pressure vented cap shall be installed the front #1 discharge.</p> <p>The front #1 discharge shall be equipped with a Class One Sub-Z II, 2 1/2" diameter silicone filled pressure gauge with pulse and vibration dampening. To prevent internal freezing, the stem and Bourdon tube shall be filled with low temperature oil and be sealed from the water system using an isolating diaphragm located in the stem. A bright metal bezel shall be supplied for resistance to corrosion and to protect the lens and case from damage. The gauge face shall be white with black numerals.</p> </div> </div> <div> <div>HORIZONTAL SPEEDLAY #1</div> <div> <p>Speedlay #1 shall be a transverse hose bed, which shall be located beneath the cab extension. Hose deployment shall be accomplished from either side of the apparatus. The speedlay hose bed flooring shall be designed to be removable, constructed from brushed finish, perforated aluminum material.</p> <p>A poly, three (3) sided, "J" shaped slide out tray shall be provided for speedlay #2 to allow easy loading of the hose off the vehicle. The tray shall be designed to slide out from either side of the vehicle.</p> <p>The tray shall have extended handles on each end of the tray (handles will be on each side of the tray at each end of the tray, total of 4 handles).</p> <p>A cadmium plated thumb type latches shall be provided for the tray to secure the tray in the speedlay opening.</p> <p>The outer edge of the speedlay #1 hosebed shall be trimmed with two (2) vertical and (1) horizontal (bottom) stainless steel rollers, on each side of the vehicle to assist in hose removal.</p> <p>The speedlay #1 discharge shall terminate through the rear wall of the hosebed with a 1 1/2" NSTM chicksan swivel adapter. The hosebed rear wall shall be slotted to allow the swivel to through the wall, allowing the pre-connected hose to be pulled off either side of the apparatus without kinking the hose at the coupling connection.</p> </div> </div> </div>		
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<div> <div>SPECIFICATIONS FOR ONE (1) 1500 GPM CUSTOM PUMPER</div> </div>	Bidder Complies	
	Yes	No
<p>Speedlay #1 shall be designed to have a <u>minimum total capacity of 3.5 cubic feet as required by NFPA -1901</u> to accommodate a minimum of 200 feet of 1-3/4" fire hose. The hose shall be loaded in a double stack configuration.</p> <p>The speedlay #1 discharge shall be plumbed utilizing 2" schedule 10 stainless steel piping and/or flexible hose, 45 degree elbows and a limited number of 90 degree sweep elbows in an assembly from the pump to speedlay hosebed.</p> <p>A minimum of one (1) grooved pipe coupling shall be furnished in this assembly to allow for flex and serviceability.</p> <p>An EB20, 2" Elkhart Unibody valve, shall be provided for the speedlay #1 discharge.</p> <p>The speedlay #1 discharge valve shall be equipped with an Elkhart Model #UBEC1C surface mounted electric valve control on the operator's panel with function plate. The control shall be equipped with ten (10) LED lights that show the range of the open/close position of the valve. The controller shall have a button to operate the Preset feature.</p> <p>The speedlay #1 discharge shall be equipped with a Class One Sub-Z II, 2 1/2" diameter silicone filled pressure gauge with pulse and vibration dampening. To prevent internal freezing, the stem and Bourdon tube shall be filled with low temperature oil and be sealed from the water system using an isolating diaphragm located in the stem. A bright metal bezel shall be supplied for resistance to corrosion and to protect the lens and case from damage. The gauge face shall be white with black numerals.</p> <p><u>HORIZONTAL SPEEDLAY #2</u></p> <p>Speedlay #2 shall be a transverse hose bed, which shall be located beneath the cab extension. Hose deployment shall be accomplished from either side of the apparatus. The speedlay hose bed flooring shall be designed to be removable, constructed from brushed finish, perforated aluminum material.</p> <p>A poly, three (3) sided, "J" shaped slide out tray shall be provided for speedlay #2 to allow easy loading of the hose off the vehicle. The tray shall be designed to slide out from either side of the vehicle.</p> <p>The tray shall have extended handles on each end of the tray (handles will be on each side of the tray at each end of the tray, total of 4 handles).</p> <p>A cadmium plated thumb type latches shall be provided for the tray to secure the tray in the speedlay opening.</p> <p>The speedlay #2 discharge shall terminate through the rear wall of the hosebed with a 1 1/2" NSTM chicksan swivel adapter. The hosebed rear wall shall be slotted to allow the swivel to through the wall, allowing the pre-connected hose to be pulled off either side of the apparatus without kinking the hose at the coupling connection.</p> <p>Speedlay #2 shall be designed to have a <u>minimum total capacity of 3.5 cubic feet as required by NFPA -1901</u> to accommodate a minimum of 200 feet of 1-3/4" fire hose. The hose shall be loaded in a double stack configuration.</p> <p>The speedlay #2 discharge shall be plumbed utilizing 2" schedule 10 stainless steel piping and/or flexible hose, 45 degree elbows and a limited number of 90 degree sweep elbows in an assembly from the pump to speedlay hosebed.</p> <p>A minimum of one (1) grooved pipe coupling shall be furnished in this assembly to allow for flex and serviceability.</p>		
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<div> <div>SPECIFICATIONS FOR ONE (1) 1500 GPM CUSTOM PUMPER</div> </div>	Bidder Complies	
	Yes	No
<p>An EB20, 2" Elkhart Unibody valve, shall be provided for the speedlay #2 discharge.</p> <p>The speedlay #2 discharge valve shall be equipped with an Elkhart Model #UBEC1C surface mounted electric valve control on the operator's panel with function plate. The control shall be equipped with ten (10) LED lights that show the range of the open/close position of the valve. The controller shall have a button to operate the Preset feature.</p> <p>The speedlay #2 discharge shall be equipped with a Class One Sub-Z II, 2 1/2" diameter silicone filled pressure gauge with pulse and vibration dampening. To prevent internal freezing, the stem and Bourdon tube shall be filled with low temperature oil and be sealed from the water system using an isolating diaphragm located in the stem. A bright metal bezel shall be supplied for resistance to corrosion and to protect the lens and case from damage. The gauge face shall be white with black numerals.</p> <p><u>PUMP PANEL - SIDE MOUNT</u></p> <p>The pump operator's control panel shall be located on the driver side of the apparatus. The pump enclosure side panels shall be completely removable and designed for easy access and servicing.</p> <p><u>PUMP PANEL MATERIAL</u></p> <p>The pump operator's panel shall be fabricated from 3/16" aluminum. The panel shall be overlaid with a custom made diagrammatic panel that shows a graphical layout of the apparatus and the discharges. The panel overlay shall be constructed from a UV resistant material with custom graphics. The panel shall be resistant to abrasive cleaning materials without fading or discoloring the layout.</p> <p>The officer side pump panel (discharge/suction panel) shall be fabricated from 1/8" black vinyl clad aluminum with a grained finish.</p> <p><u>VERTICALLY HINGED, SPLIT PUMP PANEL OFFICER SIDE</u></p> <p>The officer's side pump panel shall be split, vertically hinged, to provide complete access to the pump and plumbing on the officer side of the pump enclosure. The panels shall be equipped with stainless steel hinges and secured with push type locks to hold the panels closed. The drains located on the officer's side panel shall be fastened to the lower panel, which shall be stationary.</p> <p><u>PUMP ACCESS PANELS</u></p> <p>Two (2) removable pump access panels shall be furnished at the forward area of the pump enclosure accessed from the front when the cab is tilted. Each access panel shall be fabricated from 1/8" aluminum tread plate.</p> <p><u>PANEL FASTENERS</u></p> <p>Stainless steel machine screws and lock washers shall be used to hold these panels in position. The panels shall be easily removable to provide complete access to the pump for major service.</p> <p><u>CAPS AND ADAPTERS SAFETY TETHER</u></p> <p>All applicable discharge and suction caps, plugs and adapters shall be equipped with chrome plated ball chain and secured to the vehicle.</p>		
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<div> <div>SPECIFICATIONS FOR ONE (1) 1500 GPM CUSTOM PUMPER</div> </div>	Bidder Complies	
	Yes	No
<div> <div><u>PUMP PANEL TRIM PLATES</u></div> <div> <p>A high polished trim plate shall be provided around each discharge port and suction inlet opening to allow accessibility to the respective valve for service and repairs.</p> </div> <div><u>DISCHARGE GAUGE TRIM BEZELS</u></div> <div> <p>Each individual discharge gauge shall be installed into a decorative chrome-plated mounting bezel that incorporates valve-identifying verbiage and color labels.</p> </div> <div><u>PUMP OPERATOR’S PANEL LIGHTING</u></div> <div> <p>The pump operator’s panel shall be illuminated by the lighting in the front body compartment.</p> <p>The officer side pump operator’s panel shall be illuminated by the lighting in the front body compartment.</p> </div> <div><u>PUMP OPERATOR'S PANEL</u></div> <div> <p>Particular attention is to be given to functional arrangement of all controls. The pump operator's panel shall accommodate the following:</p> <ul style="list-style-type: none"> • Water tank fill valve • All discharge valve controls • Water tank suction control valve • Pump primer valve • Engine throttle control • Master compound vacuum and pressure gauges (built into governor display) • Individual discharge gauges • Pump shift engaged indicator light • Water tank water level indicator • Engine tachometer • Engine oil pressure gauge with audible alarm • Engine water temperature gauge with audible alarm • Low voltage light and audible alarm • Pump panel light switch • Speed counter (Underwriters) • Pump performance plate (Underwriters) • Pump serial No. plate • Voltmeter • Hour meter (Pump Hours). • Pump panel air horn actuation button labeled "EVACUATION" in white letters with a red background. • Air inlet/outlet chuck (right side panel). • Fire Research #TGA300 "IN CONTROL" pressure governor control. </div> <div><u>PUMP TEST PORTS</u></div> <div> <p>The pump panel shall be equipped with Vacuum & Pressure test plugs to allow for test equipment to monitor pump pressure and vacuum levels. Chrome plugs and labels shall be provided for the test ports.</p> </div> <div><u>MASTER PUMP GAUGES</u></div> <div> <p>The master pump intake pressure and vacuum, and the main pump discharge pressure shall be indicated on the pressure governor display.</p> </div> </div>		
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<div> <div>SPECIFICATIONS FOR ONE (1) 1500 GPM CUSTOM PUMPER</div> </div>	Bidder Complies	
	Yes	No
<div> <div><u>PRESSURE & COMPOUND GAUGE RANGES</u></div> <div> <p>All applicable pressure gauges shall have a range of 0 - 400 P.S.I., and the compound gauge shall have a range of -30" - 0 - 400 P.S.I.</p> </div> <div><u>ENGINE COOLER</u></div> <div> <p>An auxiliary cooler or heat exchanger shall be installed in the engine compartment between the engine and the chassis radiator. The cooler shall permit the use of water from the pump for cooling system. The cooling shall be done without mixing engine and pump water.</p> </div> <div><u>PUMP OVERHEAT INDICATOR</u></div> <div> <p>An MC Products pump overheat indicator with buzzer shall be provided on the pump operator's panel to provide a visual flashing signal before a critical pump temperature is reached. The indicator shall be set to warn at +/- 125°F.</p> </div> <div><u>TANK LEVEL GAUGE</u></div> <div> <p>An Innovative Controls model #3030385, Ultra-Bright LED water level monitor shall be provided on the pump operator's panel. The level gauge shall contain fourteen (14) high intensity LED's on the display in a "V" pattern allowing the full, 3/4, 1/2, 1/4 and refill levels to be easily distinguished at a glance. It shall be maintenance free and field adjustable.</p> <p>The gauge shall use a pressure transducer #3030376-01 installed near the bottom of the water tank to determine the correct volume in the tank.</p> <p>An Innovated Controls model #3030362, remote relay module shall be furnished to provide outputs for large indicator lights on the side of the vehicle.</p> </div> <div><u>LARGE LIGHT WATER LEVEL GAUGE, EACH SIDE OF CAB</u></div> <div> <p>A large light water level gauge system shall be provided on both sides of the cab. Each side shall have a Whelen model PSTANK, LED strip light, surface mounted, behind the rear crew door above the handrail.</p> <p>The strip light shall indicate the following water levels:</p> <div> <ul style="list-style-type: none"> • Green LED cluster Full tank • Blue LED cluster 3/4 tank • Amber LED cluster 1/2 tank • Red LED cluster 1/4 tank </div> <p>The red LED's shall burn steady to indicate 1/4 tank and shall start to flash when the water level drops below 1/4 tank. To prevent distraction to drivers, this tank level gauge shall be wired to display only when the park brake is engaged.</p> </div> <div><u>WATER TANK</u></div> <div> <p>The water tank shall have a capacity of 500 gallons or more, constructed from Poly material.</p> </div> <div><u>WATER TANK CONSTRUCTION</u></div> <div> <p>The Poly water tank shall be constructed of PT3 polypropylene material. This material shall be a non-corrosive stress relieved thermoplastic and UV stabilized for maximum protection. Tank shell thickness may vary depending on the application and may range from 1/2 to 1" as required. Internal baffles are generally 3/8" in thickness.</p> </div> </div>		
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SPECIFICATIONS FOR ONE (1) 1500 GPM CUSTOM PUMPER

Bidder
Complies

Yes

No

The tank shall be of a specific configuration and is so designed to be completely independent of the body and compartments. Joints and seams shall be fused using nitrogen gas as required and tested for maximum strength and integrity. The tank construction shall include PolyProSeal technology wherein a sealant shall be installed between the plastic components prior to being fusion welded. This sealing method will provide a liquid barrier offering leak protection in the event of a weld compromise. The top of the booster tank is fitted with removable lifting assembly designed to facilitate tank removal. The transverse and longitudinal swash partitions shall be manufactured of a minimum of 3/8" PT3 polypropylene. All partitions shall be equipped with vent and air holes to permit movement of air and water between compartments. The partitions shall be designed to provide maximum water flow. All swash partitions interlock with one another and are completely fused to each other as well as to the walls of the tank. All partitions and spacing shall comply with NFPA 1901. The walls shall be welded to the floor of the tank providing maximum strength as part of the tank's unique Full Floor Design. Tolerances in design allow for a maximum variation of 1/8" on all dimensions.

WATER CAPACITY CERTIFICATION

All tanks shall be tested and certified as to capacity on a calibrated and certified tilting scale. Each tank shall be weighed empty and full to provide precise fluid capacity. Each Poly-Tank's III is delivered with a Certificate of Capacity delineating the weight empty and full and the resultant capacity based on weight.

WATER TANKNOLOGY TAG

A tag shall be installed on the apparatus in a convenient location and contain pertinent information including a QR code readable by commercially available smart phones. The information contained on the tag shall include the capacity of the water and foam (s), the maximum fill and pressure rates, the serial number of the tank, the date of manufacture, the tank manufacturer, and contact information. The QR code will allow the user to connect with the tank manufacturer for additional information and assistance.

WATER TANK ISO CERTIFICATION

The tank must be designed and fabricated by a tank manufacturer that is ISO 9001:2000 certified in each of its locations. The ISO certification must be to the current standard in effect at the time of the design and fabrication of the tank.

WATER TANK LID

The tank cover shall be constructed of 1/2" thick PT3 polypropylene and UV stabilized, to incorporate a multi-piece locking design, which allows for individual removal and inspection if necessary. The tank cover(s) shall be flush or recessed 3/8" from the top of the tank and shall be fused to the tank walls and longitudinal partitions for maximum integrity. Each one of the covers shall have hold downs consisting of 2" minimum polypropylene dowels spaced a maximum of 40" apart. These dowels shall extend through the covers and will assist in keeping the covers rigid under fast filling conditions. A minimum of two lifting dowers shall accommodate the necessary lifting hardware.

WATER TANK FILL TOWER

The tank shall have a combination vent and manual fill tower. The fill tower shall be constructed of 1/2" PT3 polypropylene and shall be a minimum dimension of 8" x 8" outer perimeter. The fill tower shall be blue in color indicating that it is a water-only fill tower. The tower shall be located in the left front corner of the tank unless otherwise specified by the tank manufacturer to the Madison Hose Company. The tower shall have a 1/4" thick removable polypropylene screen and a PT3 polypropylene hinged cover. The capacity of the tank shall be engraved on the top of the fill tower lid. Inside the fill tower there shall be a combination vent/overflow pipe. The vent overflow shall be a minimum of schedule 40 polypropylene pipe with a minimum I.D. of that is designed to run

<div> <div>SPECIFICATIONS FOR ONE (1) 1500 GPM CUSTOM PUMPER</div> </div>	Bidder Complies	
	Yes	No
<p>through the tank, and shall be piped to discharge water behind the rear wheels as required in NFPA 1901 so as to not interfere with rear tire traction.</p> <p><u>WATER TANK OVERFLOW AND VENT PIPE</u></p> <p>The fill tower shall be fitted with an integral 4" I.D. schedule 40 P.V.C. combination overflow/vent pipe running from the fill tower through the tank to a 4" coupling flush mounted into the bottom of the tank to allow water to overflow behind the chassis rear axle.</p> <p><u>WATER TANK SUMPS</u></p> <p>The tank sumps shall be a minimum of 10" wide x 10" long x 3" deep. An anti-swirl plate shall be mounted inside the sump, approximately 1" above the bottom of each sump.</p> <p><u>WATER TANK SUMP CONNECTION</u></p> <p>The bulkheads of the water tank shall be fitted with one (1) front and one (1) rear.</p> <p><u>WATER TANK 3" SUMP DRAIN</u></p> <p>A 3" drain plug shall be provided.</p> <p><u>WATER TANK FLANGES/OUTLETS</u></p> <p>There shall be two (2) standard tank outlets; one for tank-to-pump suction line which shall be a minimum of 4" coupling and one for a tank fill line which shall be a minimum of a 2" N.P.T. coupling. All tank fill couplings shall be backed with flow deflectors to break up the stream of water entering the tank.</p> <p><u>WATER TANK MOUNTING</u></p> <p>The tank shall rest on the body cross members spaced a maximum of 22" apart, and shall be insulated from these cross members with a minimum of 3/8" nylon webbing or 1/2" rubber, 2-1/2" wide. The tank shall sit cradle-mounted using four (4) corner angles of 6 x 6 x 4 x 0.250 welded directly to the body cross members. The angles shall keep the tank from shifting left to right or front to rear. The tank is designed on the free-floating suspension principle and shall not require the use of hold downs. The tank shall be completely removable without disturbing or dismantling the apparatus body structure. The body or hose bed cross braces shall act as water tank retainers.</p> <p><u>APPARATUS BODY DESIGN CONSTRUCTION</u></p> <p>The body side and compartment assemblies shall be designed and assembled to provide maximum strength and durability under all operating conditions.</p> <p>Special attention shall be taken to minimize corrosion on all fabricated parts and structural members of the body. All bolt-on components shall be provided with a dissimilar metals isolation barrier to prevent electric corrosion. The body design shall also incorporate removable panels to access spring hangers, rear body mounts and fuel tank sending units.</p> <p>The body assembly shall be an all-welded configuration. The body shall be completely isolated from the cab.</p> <p><u>BODY AND COMPARTMENT FABRICATION - 3/16" ALUMINUM</u></p> <p>All compartment panels and body side sheets shall be entirely 3/16" aluminum (5052-H32). Each side compartment assembly shall be both plug welded and stitch welded to ensure proper weld penetration on all panels while avoiding the possible warping caused by a full seam weld. The side</p>		
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	Yes	No
<p>compartments shall be welded on a fixture to ensure true body dimensions of all door openings. The side compartments and body side panels are then set into a body squaring fixture where the super structure is installed and the entire body is aligned to be completely symmetrical. The super structure is then welded to the compartment side panels and reinforcement plates are inserted which allows the compartment panels to become an integral component of the body support structure. A full seam weld shall not be used due to the applied heat which could distort sheet metal and remove the protective coating from the perimeter of the welded area. All seams shall be caulked prior to finish paint to ensure proper compartment seal.</p> <p><u>SUPER STRUCTURE - ALUMINUM</u></p> <p>The body super structure shall be an all welded configuration utilizing a combination of 3" x 1-1/2" 6061-T6 thick walled structural tubing and 6061 structural channel.</p> <p>This structure shall be designed to totally support the full length and width of the body and shall be welded to the body side compartments by use of reinforcement plates to incorporate the compartments into an integral part of the body weldment.</p> <p>The super structure shall be bolted to the sides of the chassis frame at four (4) points.</p> <p><u>STEPPING, STANDING, & WALKING SURFACES</u></p> <p>All stepping, standing, and walking surfaces on the body shall meet NFPA #1901 anti-slip standards. Aluminum tread plate utilized for stepping, standing, and walking surfaces shall be ALCOA No Slip type. Upon request by the Madison Hose Company, the manufacturer shall supply proof of compliance with this requirement.</p> <p>All vertical surfaces on the body, which incorporate aluminum tread plate material, will utilize the same material pattern to provide a consistent overall appearance. NO EXCEPTIONS!</p> <p><u>DRIVER'S SIDE COMPARTMENTATION</u></p> <p>One (1) full height compartment shall be provided at the front of the body, measuring 71" high x 24" wide with a single Amdor roll-up door opening 67" high x 21" wide. This compartment shall contain the pump operator's panel. The lower section of the compartment shall have an area approximately 9" tall x 21" wide x 18" deep for storage of Madison Hose Company supplied equipment.</p> <p>One (1) full height compartment shall be provided at the front of the body, measuring 71" high x 36" wide with a single hinged door opening 67" high x 33" wide. Hinged door will be "suicide style" with the door opening away from the cab of the apparatus.</p> <p>One (1) full height compartment shall be provided to the rear of the rear wheels, measuring 71" high x 54" wide with a double hinged door opening 64" high x 51" wide.</p> <p>One (1) equipment compartment shall be provided above the rear wheels, measuring 40.5" high x 64" wide with a double hinged (barn door style) door opening 36.5" high x 58" wide.</p> <p>The driver's side body compartments shall be 29" deep for the full height of the compartments.</p> <p>The driver side compartmentation provides a total of 167 cubic feet of storage capacity.</p> <p><u>OFFICER'S SIDE COMPARTMENTATION</u></p> <p>One (1) full height compartment shall be provided at the front of the body, measuring 71" high x 60" wide with a double hinged door opening 67" high x 57" wide.</p>		
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<div> <div>SPECIFICATIONS FOR ONE (1) 1500 GPM CUSTOM PUMPER</div> </div>	Bidder Complies	
	Yes	No
<p>One (1) full height compartment shall be provided to the rear of the rear wheels, measuring 71" high x 54" wide with a double hinged door opening 64" high x 51" wide.</p> <p>One (1) equipment compartment shall be provided above the rear wheels, measuring 40.5" high x 64" wide with a double hinged (barn door style) door opening 36.5" high x 58" wide.</p> <p>The officer's side body compartments shall be 29" deep for the full height of the compartments.</p> <p>The officer side compartmentation provides a total of 179 cubic feet of storage capacity.</p> <p><u>REAR STEP COMPARTMENT</u></p> <p>One rear step compartment approximately 40" high x 42" wide shall be provided at the rear of the apparatus. Rear compartment will be approximately 40" tall internal. The rear compartment door will be an Amdor Roll-up door painted job color.</p> <p><u>AMDOR ROLL-UP REAR STEP COMPARTMENT DOOR</u></p> <p>The rear step compartment door shall be an Amdor roll-up door. The roll-up door shall be equipped with job color paint finish.</p> <p><u>BODY ROOF COMPARTMENTS (DRIVER'S SIDE)</u></p> <p>Roof hatch style compartments shall be provided the full length of the body, on the driver's side of the body hose bed area and shall be designed as an integral extension of the lower side compartments with a painted exterior finish. Drain tubes shall be provided at each end of each side compartment which shall extend down through the lower compartments.</p> <p>Each side roof compartment shall extend the length of the body, which shall be evenly divided into three (3) individually accessed areas, which shall be open through from the front to the rear. The compartment depth shall extend from the ceiling area of the upper side compartments to the top of the body. The interior compartment width of each side roof compartment shall be a minimum of 25-1/2" inside width with a 22" wide access door at the top.</p> <p>Each roof compartment shall be equipped with an overlapping, hinged lift up tread plate door. These doors shall be constructed of 3/16" aluminum tread plate with a 15 degree break on all sides. Each door shall have two (2) gas shock style stay open devices which shall also retain the door in the closed position. Each compartment shall be equipped with a floor drain with a plastic tube to direct the water below the body.</p> <p>Protective panels shall be applied inside the compartments to cover any exposed wiring or recessed side body lighting, provided on the unit. These panels shall reduce the overall usable compartment area in the compartments.</p> <p><u>BODY ROOF COMPARTMENTS (OFFICER'S SIDE)</u></p> <p>Roof hatch style compartments shall be provided the full length of the body, on the officer's side of the body hose bed area and shall be designed as an integral extension of the lower side compartments with a painted exterior finish. Drain tubes shall be provided at each end of each side compartment which shall extend down through the lower compartments.</p> <p>Each side roof compartment shall extend the length of the body, which shall be evenly divided into three (3) individually accessed areas, which shall be open through from the front to the rear. The compartment depth shall extend from the ceiling area of the upper side compartments to the top of the body. The interior compartment width of each side roof compartment shall be a minimum of 25-1/2" inside width with a 22" wide access door at the top.</p>		
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<div> <div>SPECIFICATIONS FOR ONE (1) 1500 GPM CUSTOM PUMPER</div> </div>	Bidder Complies	
	Yes	No
<p>Each roof compartment shall be equipped with an overlapping, hinged lift up tread plate door. These doors shall be constructed of 3/16" aluminum tread plate with a 15 degree break on all sides. Each door shall have two (2) gas shock style stay open devices which shall also retain the door in the closed position. Each compartment shall be equipped with a plastic tube to direct the water below the body.</p> <p>Protective panels shall be applied inside the compartments to cover any exposed wiring or recessed side body lighting, provided on the unit. These panels shall reduce the overall usable compartment area in the compartments.</p> <p><u>COMPARTMENT DOORS</u></p> <p>The compartment doors shall be flush type with the outer skin fabricated from 3/16" (5052 H32) aluminum. The door skin shall have a formed flange on one (1) side used as a hinge mounting flange. The door skin shall have reinforcing channels welded internally which accommodate the inner door pan mounting.</p> <p>The 2" thick compartment doors shall reduce the overall specified compartment depth by 2".</p> <p>All horizontally hinged doors shall be 1" thick to provide additional compartment storage area. The 1" thick horizontally hinged doors shall reduce the overall specified compartment depth by 1-1/4".</p> <p><u>BRUSHED FINISHED DOOR PANS</u></p> <p>Each inner pan shall be constructed from 1/8" aluminum material, which shall be provided with a brushed finish. The brushed finish shall allow the Madison Hose Company to remove scratches from the inner door pan with sand paper or scuff pad. Each inner door pan shall be fastened to the door frame channels to provide a smooth, snag-free inner door surface. The inner door pan on the running board compartments shall enclose the latch and reinforcements completely. The pan shall be easily removable to access the enclosed latch mechanism.</p> <p><u>COMPARTMENT DOOR HINGES</u></p> <p>Hinges shall be full length polished stainless steel piano type. The hinges shall be mounted with stainless steel hardware.</p> <p><u>COMPARTMENT DOOR SEALS</u></p> <p>Enclosed body compartment doors shall be equipped with a closed cell gasket. The gasket material shall be EPDM to provide a gasket resistant to weather, temperature extremes, and aging.</p> <p><u>COMPARTMENT DOOR LATCHES</u></p> <p>Externally latched body doors shall be equipped with stainless steel D-ring handles.</p> <p>Rotary door latches shall be provided for all full height body doors, which shall incorporate rotary latches at the top and bottom of all externally latched single or double doors. Linkages shall be provided between the actuation handle and the latch mechanisms.</p> <p>The blank door of a double door configuration shall have rotary latches at the top and bottom of each door with the latch release lever accessible thru the door frame, which eliminates the need to reach inside the compartment to release the door. Linkages shall be provided between the actuation handle and the latch mechanisms.</p> <p>Horizontally hinged doors shall be equipped with a single rotary door latch.</p>		
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<div> <div>SPECIFICATIONS FOR ONE (1) 1500 GPM CUSTOM PUMPER</div> </div>	Bidder Complies	
	Yes	No
<div> <div>COMPARTMENT DOOR STAY ARMS</div> <p>Eberhard gas shock type door hold open devices shall be provided for each vertically and horizontally hinged door.</p> <div> <div>SWEEP-OUT COMPARTMENT FLOORS</div> <p>Compartment floors shall be welded to the compartment walls and have a sweep out design for easy cleaning.</p> <p>Compartments with hinged doors shall have the door opening flanges bend down to produce the sweep-out design.</p> <p>Compartments with roll-up style doors shall have the external floor flange stepped down, 1/2" high x 2" deep, to produce a sealing surface for the roll-up doors below the compartment floor. The sweep out design shall also permit easy cleaning.</p> <div> <div>STAINLESS STEEL SILL PROTECTORS</div> <p>A 90° angle door sill protector, fabricated from 18 gauge brushed finish stainless steel shall be installed on the bottom external edge of each body compartment door opening to help protect this area from paint chipping.</p> <div> <div>COATED FASTENERS</div> <p>All exterior fasteners shall be coated stainless steel screws. Screw threads shall be coated with reusable, self-locking, sealing material to provide vibration resistance. Screw heads shall be coated with a sealing element to prevent galvanic corrosion between dissimilar metals. Non-coated screws shall only be provided as part of vendor supplied component installations. NO EXCEPTIONS!</p> <div> <div>COMPARTMENT LOUVERS</div> <p>Ventilation between compartments to atmosphere shall be provided and located to avoid water entry into compartments.</p> <div> <div>ACCESS PANELS</div> <p>Removable access panels shall be provided to access fuel tank sender, electrical junction compartment and rear body mounts.</p> <p>Protective panels shall be located in the rear compartments providing access to the lights and associated wiring. The covers shall also serve as protective covers to prevent inadvertent damage to lights or wiring from tools or equipment located in the compartment.</p> <div> <div>REAR BODY PANEL</div> <p>The rear body panel shall extend the full width between the side compartments. This panel shall be full height from the rear step compartment to the hose bed floor. The panel shall be bolted on and removable, with no part of the rear panel attached to the booster tank. The rear body panel material shall be smooth aluminum.</p> <div> <div>BODY RUB RAILS</div> <p>Sacrificial C-Channel style rub rails shall be mounted at the base of the body, extend outward from the body. The rub rails shall extend the full length of the main body. Rub rails shall be designed to bolt to the body from the bottom side of the compartment area, so as not to damage the body side panels on initial impact and to provide for ease of replacement.</p> </div> </div> </div> </div> </div> </div> </div> </div>		
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<div> <div>SPECIFICATIONS FOR ONE (1) 1500 GPM CUSTOM PUMPER</div> </div>	Bidder Complies	
	Yes	No
<div> <div> <div>REAR STEP</div> <div> <p>The rear step shall be ten (10) inches deep, with eight (8) inches recessed between the rear portion of the rear side compartments and an additional two (2) inches extended beyond the rear of the body. The step shall be fabricated from 3/16" polished aluminum tread plate, and shall be rigidly reinforced. The recessed portion of the step shall be 48" wide.</p> <p>The rear edge of the step shall be designed to accommodate the rear clearance lights, recessed for protection in the step reinforcement channel. This step shall be bolted into place with a minimum 1/2" clearance gap between it and the body panel.</p> </div> </div> <div> <div>INTERMEDIATE REAR STEP</div> <div> <p>An eight (8) inch deep, bolt on intermediate rear step, fabricated from 3/16" aluminum tread plate, shall be installed. The step shall be approximately 8" deep x 48" wide.</p> </div> </div> <div> <div>ILLUMINATED GRAB HANDLES WITH REFLECTIVE STRIPS</div> <div> <p>All hand rails shall be Hansen 1-1/4" outer diameter, knurled bright anodized aluminum extrusion, designed to meet NFPA 1901 requirements.</p> <p>Each grab rail shall have white LED lights that shall be wired to the DOT marker lights and interlocked to illuminate when the parking brake is applied. In addition to the LED lights, each handrail shall have two (2) red diamond grade reflective strips for enhanced visibility.</p> <p>Molded gaskets shall be installed between the handrail stanchion castings and body surfaces to prevent electrolytic reaction between dissimilar metals and to protect paint.</p> </div> </div> <div> <div>GRAB RAIL LOCATIONS:</div> <div> <p>Grab rails shall be provided at the following specified locations. Additional grab rails shall be provided adjacent to any additional steps specified to comply with NFPA 1901.</p> <p>Two (2) vertical rails shall be mounted on the rear edge of the beavertails, one (1) each side.</p> <p>One (1) horizontal, full width handrail shall be installed on the rear, below the level of the hose bed.</p> </div> </div> <div> <div>FOLDING STEP(S) - BODY REAR DRIVER SIDE</div> <div> <p>Four (4) Cast Products model SP4401-1-CH-A-BL LED lighted large folding steps with RG0005 gasket, with a textured chrome plate finish shall be provided on driver side body rear to provide NFPA compliant access (maximum 18" height between steps) to an upper horizontal walking surface (compartment cap, dunnage area, fabricated step, or upper body compartments).</p> <p>Each step shall have an LED light at the top and bottom of each step to illuminate the stepping areas.</p> </div> </div> <div> <div>FOLDING STEPS- BODY REAR OFFICER SIDE</div> <div> <p>Four (4) Cast Products model SP4401-1-CH-A-BL LED lighted large folding steps with RG0005 gasket, with a textured chrome plate finish shall be provided on officer side body rear to provide NFPA compliant access (maximum 18" height between steps) to an upper horizontal walking surface (compartment cap, dunnage area, fabricated step, or upper body compartments).</p> </div> </div> </div>		
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<div> <div>SPECIFICATIONS FOR ONE (1) 1500 GPM CUSTOM PUMPER</div> </div>	Bidder Complies	
	Yes	No
<p>Each step shall have an LED light at the top and bottom of each step to illuminate the stepping areas.</p> <p><u>FOLDING STEP(S) - BODY REAR</u></p> <p>Two (2) Cast Products model SP4401-1-CH-A-BL LED lighted large folding steps with RG0005 gasket, with a textured chrome plate finish shall be provided on driver side body rear to provide NFPA compliant access (maximum 18" height between steps) to an upper horizontal walking surface (compartment cap, dunnage area, fabricated step, or upper body compartments). Location to be determined at pre-con.</p> <p>Each step shall have an LED light at the top and bottom of each step to illuminate the stepping areas.</p> <p><u>SAFETY SIGNS AT REAR STEP AND CROSS WALKWAYS</u></p> <p>Safety signs shall be located on the vehicle at the rear step, and at any cross walkways, to warn personnel that riding in or on these areas while the vehicle is in motion is prohibited.</p> <p><u>REAR WHEEL WELL LINERS</u></p> <p>Fully removable, one piece, bolt-in, aluminum rear wheel well liner and fenderette will be provided. The wheel well liners will be natural metal finish and will protect the front and rear compartments and main body supports from damage. Wheel well liners and fenderettes which are welded in place or are only partially removable shall not be considered. NO EXCEPTIONS!</p> <p><u>DRIVER FRONT FENDER STORAGE</u></p> <p>A storage compartment shall be inserted into the front driver side body fender. The compartment shall be sized large enough to store three (3) SCBA cylinders or fire extinguishers, with a maximum length of 26". The compartment shall have a non-abrasive lined floor area for the three (3) devices. The compartment shall be enclosed by a door painted to match the primary body color, with a single point latch and hinge. The back side of the door shall have a section of nylatron installed to protect the door surface from the items stored in the compartment. This compartment shall be tied into the "Do Not Move Apparatus" warning system.</p> <p><u>OFFICER FRONT FENDER STORAGE</u></p> <p>A storage compartment shall be inserted into the front officer side body fender. The compartment shall be sized large enough to store three (3) SCBA cylinders or fire extinguishers, with a maximum length of 26". The compartment shall have a non-abrasive floor area for the three (3) devices. The compartment shall be enclosed by a door painted to match the primary body color, with a single point latch and hinge. The back side of the door shall have a section of nylatron installed to protect the door surface from the items stored in the compartment. This compartment shall be tied into the compartment door ajar/do not move apparatus warning system.</p> <p><u>DRIVER REAR FENDER STORAGE</u></p> <p>A storage compartment shall be inserted into the rear driver side body fender. The compartment shall be sized large enough to store two (2) SCBA cylinders or fire extinguishers, with a maximum length of 26". The compartment shall have a non-abrasive floor area for the two (2) devices. The compartment shall be enclosed by a door painted to match the primary body color, with a single point latch and hinge. The back side of the door shall have a section of nylatron installed to protect the door surface from the items stored in the compartment. This compartment shall be tied into the compartment door ajar/do not move apparatus warning system.</p>		
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<div> <div>SPECIFICATIONS FOR ONE (1) 1500 GPM CUSTOM PUMPER</div> </div>	Bidder Complies	
	Yes	No
<div> <div>OFFICER REAR FENDER STORAGE</div> <p>A storage compartment shall be inserted into the rear officer side body fender. The compartment shall be an open storage area, sized as tall and wide as possible and a minimum of 26" deep. The compartment shall be enclosed by a door painted to match the primary body color, with a single point latch and hinge. The back side of the door shall have a section of nylatron installed to protect the door surface from the items stored in the compartment. This compartment shall be tied into the compartment door ajar/do not move apparatus warning system.</p> <p>This compartment shall be capable of storing various devices including wheel chocks, salvage tarps, rope bags, etc.</p> <div>REAR MUD FLAPS</div> <p>One (1) continuous length, heavy duty mud flap shall be provided behind the rear wheels.</p> <div>REAR TOW EYES</div> <p>Two (2) painted tow eyes shall be furnished on the rear of the vehicle. The tow eyes shall be made from plate steel and shall be bolted directly to the chassis frame rails with grade 8 bolts and shall extend below the body. The tow eyes shall be smooth and free from sharp edges, and have a minimum eyelet hole of 2-1/2". The tow eyes shall be painted.</p> <div>WINCH RECEIVER POINT- REAR OF BODY</div> <p>A receiver point shall be provided below the rear of the body for a portable winch. The receiver point shall be a 2 1/2" x 2 1/2" x 1/4" seamless steel tube welded and gusseted to 3" x 1 1/2" steel channel directly bolted to four points on the chassis frame rails. A 12V electrical connection with a quick disconnect compatible with the portable winch shall be provided adjacent to the receiver point. A plastic end cap shall be provided for the quick disconnect. - This is either below the truck or mounted inbetween the rear frame with the receiver hitch at the rear bumper (not to extend out past the rear step)</p> <div>WINCH RECEIVER POINT - EACH SIDE OF THE BODY</div> <p>A receiver point shall be provided beneath the rub rail toward each side of the Rescue body for a portable winch. The receiver point shall be a 2 1/2" x 2 1/2" x 1/4" full width of body seamless steel tube welded and gusseted to 3" x 1 1/2" steel channel directly bolted to four points on the chassis frame rails. A 12V electrical connection with a quick disconnect compatible with the portable winch shall be provided adjacent to the receiver point. A plastic end cap shall be provided for the quick disconnect. - Must be rated for a 12,500lb winch</p> <div>ELECTRIC WINCH</div> <p>A Warn 90360 ZEON 10-S Multi-Mount Winch Kit _10000 lb. Portable electric winch shall be provided to mount in the specified winch receivers.</p> <p>A Wireless remote control head shall be provided The winch shall be equipped with 125' of 5/16" EIPS industrial grade wire rope, including hook. A hawse 4 head roller fairlead assembly shall be provided at the winch opening.</p> <p>The winch shall meet all SAE J706 requirements as outlined NFPA -1901.</p> </div>		
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<div> <div>SPECIFICATIONS FOR ONE (1) 1500 GPM CUSTOM PUMPER</div> </div>	Bidder Complies	
	Yes	No
<div> <div><u>RAPPELLING HITCHES</u></div> <div> <p>Four (4) chrome plated eyelet mounted into a 2" x 2" steel tube shall be provided to be inserted into the specified receivers on the apparatus for rappelling applications. Working load of the hitch shall be 500#.</p> </div> </div> <div> <div><u>HOSE BED</u></div> <div> <p>The hose bed shall be located directly above the booster tank and shall be free from all sharp objects such as bolts, nuts, etc., to avoid damage to fire hose.</p> <p>The hose bed will provide a minimum of 80 cubic feet of hose storage area for 2 ½" or larger fire hose, exceeding NFPA 1901 minimum pumper hose storage requirements.</p> <p>For added strength and rigidity, the hose bed side walls shall be (3) inches thick. The top edge of the front wall shall be flanged inward two (2) inches and downward one (1) inch.</p> </div> </div> <div> <div><u>HOSE BED FLOORING</u></div> <div> <p>The hose bed flooring shall be constructed from extruded aluminum and be properly spaced for ventilation. The flooring shall be smooth and free from sharp edges to avoid hose damage. The hose bed floor shall be removable to provide access to inner body framework.</p> </div> </div> <div> <div><u>HOSE BED PARTITIONS</u></div> <div> <p>Two (2) fully adjustable 3/16", brushed finish, aluminum hose bed partitions shall be provided. Partitions shall be easily adjustable by means of Unistrut channels located at the front and rear of the hose bed. Partitions shall be removable for access to the booster tank.</p> </div> </div> <div> <div><u>TUBING REINFORCEMENT ON TOP & REAR EDGE OF PARTITIONS (2)</u></div> <div> <p>The top and rear edge of each of the adjustable hose bed partitions shall have an integral tubing reinforcement welded on for additional support.</p> </div> </div> <div> <div><u>HOSE PARTITION CUTOUTS</u></div> <div> <p>The hose bed partitions shall have a vertical handhold cutout at upper rear edge of the partition.</p> </div> </div> <div> <div><u>MADISON HOSE COMPANY REQUIRED HOSE STORAGE CAPACITY</u></div> <div> <p>The apparatus hose bed shall be capable of storing the following Madison Hose Company specified hose loads. In addition, the vehicle weight analysis shall be based off of this hose load provided the specified hose load exceeds NFPA minimum standards.</p> <ul style="list-style-type: none"> • 1000 Feet of 4" supply hose • 300 Feet of 3" supply hose • 300 Feet of 2 ½" attack hose </div> </div> <div> <div><u>HOSE BED COVER, VINYL WITH INDIVIDUAL BUNGEE</u></div> <div> <p>A hose bed cover shall be provided and installed. The cover shall be made from 22 ounce; heavy-duty vinyl coated polyester fabric (TXN 226). The cover shall be sewn with ultraviolet resistant thread and shall have 2" wide nylon webbing sewn around the perimeter to provide additional strength.</p> </div> </div>		
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<div> <div>SPECIFICATIONS FOR ONE (1) 1500 GPM CUSTOM PUMPER</div> </div>	Bidder Complies	
	Yes	No
<p>The cover shall be secured to the top front body flange with quarter-turn fasteners and Velcro and shall be secured to the top side body flanges with individual bungee loops. A weighted flap shall be furnished on the rear of the cover with two (2) bungee cords.</p> <p><u>HYPALON MATERIAL RED IN COLOR</u></p> <p>The Hypalon material shall be red in color.</p> <p><u>ADJUSTABLE SHELVING</u></p> <p>Compartment shelving shall be constructed of 3/16" brush finish aluminum with a 2" upward bend at front and rear, and side supports. Shelving shall be vertically adjustable with spring nuts in aluminum strut channel.</p> <p>Adjustable shelves shall be located as follows:</p> <p>Two (2) in the driver side front compartment</p> <p>Two (2) in the officer side front compartment</p> <p>One (1) in the driver side rear compartment</p> <p>One (1) in the officer side rear high side compartment</p> <p><u>SLIDE OUT FLOOR MOUNT SHELVING</u></p> <p>Slide out floor mount compartment shelving shall be constructed of 3/16" brush finish aluminum with a 2" upward bend at front and rear, and side supports attached to #250 rated slides. Slide out floor mount shelving shall have gas shocks to hold the tray in and out.</p> <p>Slide out floor mount shelving shall be provided as follows:</p> <p>One (1) in the driver side pump panel compartment</p> <p><u>500 POUND FLOOR MOUNTED ROLL OUT TRAYS</u></p> <p>Floor mounted roll-out trays shall consist of heavy duty, roller bearing slide tracks with an end load rating of 500 pounds, securely fastened to the compartment floor. The tray shall be fabricated from 3/16" brushed aluminum with a minimum 2" high flange on each of the four sides to assist in retaining the equipment stored on each tray. The slide tracks shall have a 70% extension.</p> <p>The 500 pound floor mounted roll out trays shall be located as follows:</p> <p>One (1) in the rear step compartment</p> <p><u>500 POUND FLOOR MOUNTED ROLL OUT TRAYS</u></p> <p>Floor mounted roll-out trays shall consist of heavy duty, roller bearing slide tracks with a load rating of 500 pounds, securely fastened to the compartment floor. The tray shall be fabricated from 3/16" brushed aluminum with a minimum 2" high flange on each of the four sides to assist in retaining the equipment stored on each tray. The slide tracks shall have a 100% extension, allowing the tray to extend out of the compartment completely.</p> <p>The 500 pound floor mounted roll out trays shall be located as follows:</p> <p>Two (2) in the driver side rear compartment</p>		
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<div> <div>SPECIFICATIONS FOR ONE (1) 1500 GPM CUSTOM PUMPER</div> </div>	Bidder Complies	
	Yes	No
<div> <div>ROLL-OUT/ DROP DOWN TRAYS</div> <p>The roll out/tilt tray shall consist of a 3/16" brushed aluminum finished aluminum tray with a minimum 2" lip on all four sides. Heavy duty aluminum Unistrut "C" channel tracking material shall be utilized to securely fasten the slide tracks to the compartment walls, while allowing height adjustment.</p> <p>The slide mechanism shall consist of a low-weight high-strength plastic to create a robust front bracket to support the aluminum tray. The rear of the tip down tray shall be mounted on a slider with an integral pivot plate. This slider and pivot plate shall be mounted inside an aluminum rail for maximum strength. The tray shall be released from the stowed position with the use of a push button and shall be capable of auto latching to the stowed position. The front handle/latch shall be designed with a double hand hold to control the tray when deployed or stowed. The roll out/tilt tray shall be rated for 330# capacity.</p> <p>Roll out/Tilt trays will be located as follows:</p> <p>One (1) in the driver side over the wheel high side compartment</p> <p>One (1) in the officer side over the wheel high side compartment</p> <div>VERTICAL PULL OUT TOOL BOARDS</div> <p>Vertical, pull out tool boards shall be provided. Each tool board shall be constructed of vertically mounted dual sided PAC-TRAC 7040 series allowing mounting of equipment on both sides of the tool board. Each tool board shall be attached to 250# roller bearing slides at the top and bottom of the tool board. 3/16" aluminum angles shall be located at the top of the tool board to guide the tool board. A gas shock shall be used to secure each tool board in the stored and deployed position. Each tool board will be attached to tracking to allow horizontal adjustment of the tool board.</p> <p>Vertical pull out tool boards shall be located as follows:</p> <p>One (1) in the driver side front compartment</p> <p>One (1) in the driver side rear compartment</p> <div>STOKES BASKET STORAGE MODULE</div> <p>A storage module shall be provided for one (1) stokes baskets. The module shall be constructed from 1/8" aluminum. The location shall be in the transverse compartment above the cab notch. The stokes basket storage area shall be designed with a clear storage area of 25" wide x 8" high x 87" long.</p> <div>DRI-DEK MATERIAL</div> <p>Dri-Dek brand floor material shall be installed on all compartment floors. The Dri-Dek shall be custom installed to provide full floor coverage.</p> <p>Floor matting material shall be provided on eleven (11) specified shelves or roll-out trays.</p> <p>The compartment flooring color shall be black.</p> <div>PAC TRAC</div> <p>Aluminum Pac Trac #7000 channel material for tool and equipment mounting shall be provided in four (4) high side compartment(s), approximately 50" wide x 29" high. All installation hardware shall be stainless steel.</p> </div> <div> <div>MADISON HOSE COMPANY # 1</div> <div>Page 89</div> </div>		

<div> <div>SPECIFICATIONS FOR ONE (1) 1500 GPM CUSTOM PUMPER</div> </div>	Bidder Complies	
	Yes	No
<div> <div> <div>CMW 6011 - DUAL HYDRAULIC REEL #1</div> <div> <p>A Custom Machine Works 6011 Dual Hydraulic reel with a variable combination of hose and cable shall be provided and mounted.</p> <p><u>Capacity each side</u> 100 FT Twinline Hydraulic Hose shall be needed on each side of the reels.</p> <p>The dual reels shall be mounted in the coffin compartment above the driver's side rear compartment.</p> <p>Hydraulic hose reel shall be mounted in the upper portion of the Driver Side Rear Coffin Compartment, ceiling or rear wall mounted as space allows.</p> <p>Two (2) reel rewind switches shall be provided on the compartment wall.</p> <p>Two (2) Hannay 4-way stainless steel roller assemblies shall be provided.</p> <p>Two (2) cable ball stops shall be installed on the cables, one (1) on each side, to keep the ends from passing through the roller assembly.</p> </div> <div> <div>CMW 6011 - REEL OPTIONS - LEFT SIDE REEL#1</div> <div> <p>One hundred feet (100') of Parker 10,000 High Pressure PSI, twin hydraulic hose for TNT tools shall provided on hydraulic reel #1.</p> <p>Standard twin line hose ends shall be supplied on the end of the hose.</p> <p>A 12' length of twin hydraulic hose 10,000 High Pressure PSI with quick-connect fittings shall be provided as feed line to the hydraulic power unit.</p> </div> <div> <div>CMW 6011 - REEL OPTIONS - RIGHT SIDE REEL#1</div> <div> <p>One hundred feet (100') of Parker 10,000 High Pressure PSI, twin hydraulic hose for TNT tools shall be provided on hydraulic reel #1.</p> <p>Standard twin line hose ends shall be supplied on the end of the hose.</p> <p>A 12' length of twin hydraulic hose 10,000 High Pressure PSI with quick-connect fittings shall be provided as feed line to the hydraulic power unit.</p> </div> <div> <div>CMW 6015 SINGLE HYDRAULIC HOSE REEL#2</div> <div> <p>A Custom Machine Works 6015 single electric rewind Hydraulic reel with a capacity of 100 feet of twin hydraulic hose at a working pressure of 10,500 psi shall be provided and mounted.</p> <p>Hydraulic hose reel shall be mounted in the upper portion of the Driver Side Rear Compartment, ceiling or rear wall mounted as space allows.</p> <p>One (1) reel rewind switch shall be provided on the compartment wall.</p> <p>One (1) Hannay 4-way stainless steel roller assembly shall be provided. The roller assembly opening shall be the full width of the reel drum.</p> <p>One (1) cable ball stop shall be installed on the cable to keep the end from passing through the roller assembly.</p> </div> </div> </div> </div> </div> </div>		
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<div> <div>SPECIFICATIONS FOR ONE (1) 1500 GPM CUSTOM PUMPER</div> </div>	Bidder Complies	
	Yes	No
<p>One hundred feet (100') of Parker 10,000 PSI, twin hydraulic hose for TNT tools shall be provided on hydraulic reel #2.</p> <p>Standard twin line hose ends shall be supplied on the end of the hose.</p> <p>A 12' length of twin hydraulic hose 10,000 PSI with quick-connect fittings shall be provided as feed line to the hydraulic power unit.</p> <p><u>CMW 6015 SINGLE HYDRAULIC HOSE REEL#3</u></p> <p>A Custom Machine Works 6015 single electric rewind Hydraulic reel with a capacity of 100 feet of twin hydraulic hose at a working pressure of 10,500 psi shall be provided and mounted.</p> <ul style="list-style-type: none"> Hydraulic hose reel shall be located in the Rescue body roof compartment Right Side above R1 compartment. The reel shall be mounted on the floor in the roof compartment and guided to the side body compartment directly below the reel. A 4-way stainless steel captive roller assembly shall be bolted to the compartment ceiling, below the reel to allow the hose to be guided on/off to the reel properly. <p>(Note: When roll up doors are provided, a full compartment width stainless steel roller shall be provided rearward of the roll up door.)</p> <p>One (1) reel rewind switch shall be provided on the compartment wall.</p> <p>One (1) Hannay 4-way stainless steel roller assembly shall be provided. The roller assembly opening shall be the full width of the reel drum.</p> <p>One (1) cable ball stop shall be installed on the cable to keep the end from passing through the roller assembly.</p> <p>One hundred feet (100') of Parker 10,000 PSI, twin hydraulic hose for TNT tools shall be provided on hydraulic reel #3.</p> <p>Standard twin line hose ends shall be supplied on the end of the hose.</p> <p>A 12' length of twin hydraulic hose 10,000 PSI with quick-connect fittings shall be provided as feed line to the hydraulic power unit.</p> <p><u>120/240 VOLT ELECTRICAL SYSTEM TESTING</u></p> <p>All line voltage wiring and permanently connected devices and equipment shall be subjected to a dielectric voltage withstand test of 900 volts for one minute. The test shall be conducted between live parts and the neutral conductor and between live parts and the vehicle frame with any switches in the circuits closed. The test shall be conducted after all bodywork has been completed. The dielectric tester shall have a minimum 500 VA transformer with a sinusoidal output voltage that can be verified.</p> <p>Electrical polarity verification shall be made of all permanently wired equipment and receptacles to determine that connections have been properly made.</p> <p><u>OPERATIONAL TESTING</u></p> <p>The apparatus manufacturer shall perform the following operation test and shall certify that the power source and any devices that are attached to the line voltage electrical system are properly connected and in working order.</p> <p>The generator shall be started from a cold start condition and the line voltage electrical system shall be loaded to 100 percent of the nameplate voltage rating.</p> <p>The following items shall be monitored and documented every 15 minutes:</p>		
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<div> <div>SPECIFICATIONS FOR ONE (1) 1500 GPM CUSTOM PUMPER</div> </div>	Bidder Complies	
	Yes	No
<div> <ul style="list-style-type: none"> • The cranking time until the generator starts and runs. • The voltage, frequency, and amperes at continuous full rated load. • The generator oil pressure, water temperature, transmission temperature, hydraulic temperature, and the battery rate charge, as applicable. • The ambient temperature and altitude. <p>The generator shall operate at 100 percent of its nameplate wattage for a minimum of two (2) hours.</p> <p><u>HARRISON 15,000-WATT HYDRAULIC DRIVEN GENERATOR</u></p> <p>One (1) Harrison Hydraulic Driven Generator model number 15.0MPC-16D rated at 15000 watts, 125/63 amps, 120/240VAC, 60 Hz, 1-phase shall be provided.</p> <p>The system shall be designed and assembled by a company with no less than 10 years experience in the manufacture of hydraulic driven generators. The system shall be tested at the full nameplate load prior to shipping and be accompanied with the test report. The test report shall document the generators performance at various loads from no load to full load to ensure reliable power delivery at those loads.</p> <p>The motor/generator shall be placed in a frame which affords protection to the components and provides a unitized mounting module containing the motor/generator, reservoir, oil cooler, filtration, manifold containing a cross port check valve and relief valve.</p> <p>The generator shall be a continuous duty, industrial type with a heavy-duty bearing and of brush less design to ensure low maintenance. No brushes or slip rings shall be allowed. The reservoir shall include an oil level sight gauge, oil temperature gauge; fill cap, oil filter, low fluid level sensor, high temperature sensor and a venturi boost unit to provide positive pressure to the pump suction port. The generator and motor shall be close coupled and aligned using a single bearing alternator design. No two (2) bearing generators shall be permitted.</p> <p>The system must be capable of producing the full nameplate power when driven from the vehicle PTO from idle to maximum engine speed. The generator system must be able to operate on either a Constant Engaged PTO or a Hot Shift PTO. The generator must be able to be used while vehicle is either stationary or in motion.</p> <p>The hydraulic motor and pump shall be of axial piston design to provide low internal leakage and a high degree of frequency stability. No gear pumps or motors shall be used. The pump shall match the system with the proper orifice, pressure compensator, and load sense settings to provide stable output regardless of engine rpm or electrical load demands.</p> <p>The system shall be capable of normal operations using a commonly available ATF fluid, such as GM Dextron III or equivalent. All fluid service points shall be in close proximity to the reservoir for ease of scheduled maintenance.</p> <p>When properly installed, the system shall be warranted for a period of not less than two (2) years or 2000 hours, whichever should come first.</p> <p><u>HARRISON IHT SYSTEM</u></p> <p>A complete Harrison IHT system shall be installed including a piggy back style “hot shift” style PTO and hydraulic pumps to power the specified Harrison hydraulic generator and the Madison Hose Company supplied TNT PTO Quad pump. The system shall be capable of providing full output with the engine at idle or at fast idle. The TNT quad pump shall be installed in the dunnage area above the pump and Madison Hose Company provided lead in hoses extended from the pump to the hydraulic reels in the roof compartments and the front bumper as specified. All pressure hoses from the truck</p> </div>		
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<div> <div>SPECIFICATIONS FOR ONE (1) 1500 GPM CUSTOM PUMPER</div> </div>	Bidder Complies	
	Yes	No
<div> <div> <div>side of the PTO to the hydraulic pump shall be provided and installed by the apparatus manufacturer. The system shall be controlled through the switches on the cab dash.</div> </div> <div> <div>DIGITAL QUAD METER FOR HARRISON GENERATORS</div> <div> <div>A weatherproof digital Quadra meter containing the volt, amp, and frequency shall be installed near the breaker panel.</div> </div> <div> <div>GENERATOR PTO</div> <div> <div>A hot shift PTO shall be provided on the transmission for the Harrison generator. The PTO shall be controlled from the cab. The control shall include a PTO engagement switch and a PTO engaged indicator light.</div> </div> <div> <div>HARRISON GENERATOR WARRANTY 6-8-10 MCR-MDS-MPC PTO/HYD GENERATORS</div> <div> <div>The specified generator shall have a two (2) year or two thousand (2000) hour warranty as provided by the generator manufacturer. A copy of the generator warranty shall be provided at time of delivery.</div> </div> <div> <div>GENERATOR LOCATION</div> <div> <div>The generator shall be permanently mounted above the pump.</div> </div> <div> <div>120/240 VOLT LOAD CENTER</div> <div> <div>The generator output line conductors shall be wired from the generator output connections to a Square D, model #QO120L125G breaker panel. The breaker panel shall be equipped with a properly sized main breaker using two (2) of the twenty (20) spaces which leaves a total of eighteen (18) available spaces.</div> <div>The generator output conductors shall be sized to 115% of the main breaker rating and shall be installed as indicated in the wiring section.</div> <div>Eighteen (18) appropriately sized, 120 volt, circuit breakers shall be provided.</div> <div>The breaker panel shall be located on the rear wall of the driver side front compartment.</div> </div> <div> <div>120 VOLT TRANSFER SWITCH</div> <div> <div>An automatic power relay shall be installed to allow interior 120 volt accessories to be powered by the 120 volt shoreline or the generator. The transfer switch will be located in a separate box located next to the main power distribution panel. The interior accessories to be powered by the shoreline shall be wired through a separate sub-panel breaker box with individual circuit breakers as required. This shall allow for a continuous power supply to the interior accessories while the apparatus is parked in the station. The maximum load for the transfer / relay shall be 20 amps at 120 volts.</div> </div> <div> <div>120/240 VOLT WIRING METHODS</div> <div> <div>Wiring/conduit shall not be attached to any chassis suspension components, water or fuel lines, air or air brake lines, fire pump piping, hydraulic lines, exhaust system components or low voltage wiring.</div> <div>All wiring shall be installed at a minimum of 12 inches away from any exhaust piping and a minimum of 6 inches from any fuel lines.</div> </div> </div> </div> </div></div></div></div></div></div>		
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<div> <div>SPECIFICATIONS FOR ONE (1) 1500 GPM CUSTOM PUMPER</div> </div>	Bidder Complies	
	Yes	No
<p>All wiring shall be securely clamped within 6 inches of any junction box and at a minimum of every 24 inches of run. All supports shall be of nonmetallic material or corrosion protected metal. All supports shall not cut or abrade conduit or cable and shall be mechanically fastened to the vehicle.</p> <p>All power supply assembly conductors, including neutral and grounding conductors, shall have an equivalent amperage rating and shall be sized to carry not less than 115% of the main breaker rating.</p> <p>All Type SO or Type SEO cable not installed in a compartment shall be installed in wire loom. Where Type SO or Type SEO cable penetrates a metal surface, a rubber or plastic grommet or bushing shall be provided.</p> <p>The installation of all 120/240 wiring shall meet the current NFPA-1901 Standards NO EXCEPTIONS!</p> <p><u>120/240 VOLT WIRING IDENTIFICATION</u></p> <p>All line voltage conductors located inside the main breaker panel box shall be individually and permanently identified. When pre-wiring for future power wiring installations, the non-terminated ends shall be labeled showing function and wire size.</p> <p><u>120/240 VOLT GROUNDING</u></p> <p>The neutral conductor of the power source shall be bonded to the vehicle frame only at the power source.</p> <p>The grounded current carrying conductor (neutral) shall be insulated from the equipment grounding conductors and from the equipment enclosures and other grounded parts. The neutral conductor shall be colored white or gray.</p> <p>In addition to the bonding required for the lower voltage return current, each body and driving/crew compartment enclosure shall be bonded to the vehicle frame by a copper conductor. The conductor shall have a minimum amperage rating of 115 percent of the name plate current rating of the power source specification label.</p> <p><u>120/240 VOLT CIRCUIT BREAKER / RECEPTACLE INSTALLATION</u></p> <p>The system shall be installed by highly qualified electrical technicians to assure the required level of safety and protection to the fire apparatus operators. When multiple circuit are required, the circuits shall be wired to the breaker panel in a staggered configuration to minimize electrical loads on each breaker or generator (leg) circuit. The wiring, electrical fixtures and components shall be to the highest industry quality standards available on the domestic market. The equipment shall be the type as designed for mobile type installations subject to vibration, moisture and severe continuous usage.</p> <p><u>120/240 VOLT RECEPTACLE INSTALLATIONS</u></p> <p>Any receptacle installed in a wet location must be a minimum of 24 inches above the ground and provided with an approved wet location cover. Wet receptacles may not be mounted at more than 45 degrees from vertical, nor can they be mounted in a face-up position.</p> <p><u>CMW 6020 - 120 VOLT ELECTRIC CORD REEL</u></p> <p>One (1) Custom Machine Works 6020, 120 volt, electric rewind cord reel shall be provided and wired to the breaker panel. The reel shall be securely mounted and equipped with a rewind control adjacent to the reel.</p>		
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<div> <div>SPECIFICATIONS FOR ONE (1) 1500 GPM CUSTOM PUMPER</div> </div>	Bidder Complies	
	Yes	No
<p>An electric rewind cord reel shall be provided. The circuit breaker used to protect any device attached to the cord reel shall be sized to the smallest electrical connection used.</p> <p>The cord reel shall be ceiling mounted in the lower rear step compartment.</p> <p>One (1) reel rewind switch shall be provided on the compartment wall</p> <p>One (1) Hannay 4-way stainless steel roller assembly shall be provided. The roller assembly opening shall be the full width of the reel drum.</p> <p>One (1) cable ball stop shall be installed on the cable to keep the end from passing through the roller assembly.</p> <p><u>ELECTRIC CABLE</u></p> <p>Two hundred (200) feet of Type SO yellow 10/3 heavy duty electric cable shall be provided on the reel.</p> <p><u>JUNCTION BOX</u></p> <p>One (1) Akron Model EJB-GFCI, four (4) outlet junction box with one (1) NEMA 5-15R GFCI rated straight blade receptacle and three (3) NEMA L5-15R twist-lock receptacles direct wired on the end of the cable shall be provided.</p> <p>One (1) Akron Electrical Junction Box shall be YELLOW.</p> <p>One (1) mounting bracket set. Akron EJB-MT shall be provided for the cord reel junction box. The location of the mounting bracket set shall be adjacent to the cord reel roller assembly.</p> <p><u>REAR OF BODY LIGHTING</u></p> <p>Two (2) Whelen model # PCP3 recessed mount 12V LED lights shall be provided and mounted into the rear of the body. Each light shall be equipped with a Whelen, model # PBA203 semi-recessed mount.</p> <p>Brackets and Headlamp to be powder coated black</p> <p>Lights shall be wired through the load management system.</p> <p>The rear of body lights shall be controlled from the following location(s):</p> <p>Cab dash, with 12 volt switch</p> <p><u>DRIVER SIDE OF BODY LIGHTING</u></p> <p>Two (2) Whelen, model # PCP3 fixed led12V LED lights with Whelen pedestal mounting brackets shall be provided. The lights shall be securely mounted on the driver side of the body.</p> <p>Brackets and head lamps to be powder coated black.</p> <p>Lights shall be wired through the load management system.</p> <p>The driver side of body fixed lights shall be controlled from the following location(s):</p> <p>Cab dash, with 12 volt switch</p>		
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<div> <div>SPECIFICATIONS FOR ONE (1) 1500 GPM CUSTOM PUMPER</div> <div>Bidder Complies</div> </div>		
	Yes	No
<div> <div>OFFICER SIDE OF BODY LIGHTING</div> <div> <p>Two (2) Whelen, model # PCP3 fixed 12V LED lights with Whelen pedestal mounting brackets shall be provided. The lights shall be securely mounted on the officer side of the body.</p> <p>Brackets and head lamps to be powder coated black.</p> <p>Lights shall be wired through the load management system.</p> <p>The officer side of body fixed lights shall be controlled from the following location(s):</p> <p>Cab dash, with 12 volt switch</p> </div> <div> <div>LIGHT TOWER</div> <div> <p>A Will-Burt Nightscan 2.3, model NS 2.3-3000 OPT surface mounted light tower shall be provided and mounted as specified.</p> <p>The light tower shall be equipped with four (4) 750-watt, 120-volt quartz halogen FRC Optimum light fixtures to provide a total of 3,000 watts of lighting. The light tower uses an RCP (Remote Control Positioner) attached to the top of the tower to allow full rotation and tilt of the light fixtures at any vertical height to ensure total scene coverage above or beside the vehicle. The light tower extends to a maximum height of 7.5 feet from the mounted surface.</p> <p>The four (4) 750-watt light heads shall require one (1) 120-volt, two pole 15-amp circuit breaker.</p> <p>The light towers functions including "auto stow," are operated by a pistol grip remote control. The remote control shall be mounted in the L2 compartment on the Driver's Side of the apparatus.</p> <p>An emergency stop button shall be integrated into the wired hand held control for added safety.</p> <p>The light tower shall be mounted in the dunnage area.</p> </div> <div> <div>LADDER STORAGE</div> <div> <p>The ground ladders shall be stored horizontally through the water tank, at the of the apparatus.</p> <p>To secure the ground ladders, a hinged rear access door shall be provided and tied into the "Do Not Move Apparatus" warning system.</p> <p>The ladder storage area shall be provided with a black vinyl coated polyester deflector at the forward opening to deflect road debris from entering the ladder storage area.</p> </div> <div> <div>GROUND LADDERS</div> <div> <p>The following Alco-Lite ground ladder complement shall be provided:</p> <ul style="list-style-type: none"> One (1) Alco-Lite model PEL-24; 24', aluminum, two (2) section extension ladder shall be provided. One (1) Alco-Lite model PRL-14; 14', aluminum, straight roof ladder with folding hooks shall be provided. </div> </div> </div> </div> </div>		
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<div> <div>SPECIFICATIONS FOR ONE (1) 1500 GPM CUSTOM PUMPER</div> </div>	Bidder Complies	
	Yes	No
<div> <ul style="list-style-type: none"> One (1) Alco-Lite model FL-10; 10', folding, aluminum, attic ladder shall be provided. <div> <div>PIKE POLE STORAGE</div> <p>Six (6) pike pole tubes shall be provided. Two (2) holders shall be accessible from the transverse cab notch compartment and four (4) shall be accessible from the rear of the apparatus. Each pike pole holder shall be labeled to indicate the pike pole length.</p> <p>Two (2) pike pole tubes shall be mounted in the transverse cab notch compartment.</p> <p>Four (4) pike pole tubes shall be mounted in the through tank ladder storage compartment.</p> <div> <div>PIKE POLES</div> <p>The following pike pole complement shall be provided:</p> <ul style="list-style-type: none"> Four (4) 6' Fire Hooks Unlimited all-purpose head, aircraft steel shaft, chisel end, and celtex grip, New York Roof Hook(s) shall be provided. Two (2) 8' Fire Hooks Unlimited app purpose head, aircraft steel shaft, chisel end, and celtex grip, New York Roof Hook(s) shall be provided.. One (1) 10' Fire Hooks Unlimited fiberglass handled pike pole(s) shall be provided. </div> <div> <div>SUCTION HOSE STORAGE</div> <p>The suction hoses shall be located beneath the hose bed, one (1) on the driver side and one (1) on the officer side. The hose storage area shall be accessed from the rear of the apparatus. The storage area shall be enclosed with a hinged door on the rear of the body that shall be tied into the "Do Not Move Apparatus" warning system.</p> <div> <div>SUCTION HOSE</div> <p>One (1) 10 foot section of six (6) inch PVC lightweight suction hose shall be furnished (Kochek or Firequip Maxi-Flex). Suction hose shall be for suction only and not to be used on pressurized hydrants or for relay pumping. Couplings shall include a long handle, female swivel on one end and a rocker lug male on the other end. All threads shall be six (6) inch N.S.T.</p> <p>One (1) 15 foot section of six (6) inch PVC lightweight suction hose shall be furnished (Kochek or Firequip Maxi-Flex). Suction hose shall be for suction only and not to be used on pressurized hydrants or for relay pumping. Couplings shall include a long handle, female swivel on one end and a rocker lug male on the other end. All threads shall be six (6) inch N.S.T.</p> <p>NOTE: All PVC suction hoses are strictly drafting hoses and must not be used on hydrants or in pressure applications, as serious personal injury or death may occur.</p> <div> <div>LOOSE EQUIPMENT</div> <p>The following items shall be provided and shipped loose with the completed apparatus at the time of delivery:</p> <ul style="list-style-type: none"> One (1) Kochek model #K45-3 spanner wrench set(s) with hydrant wrench and holder. One (1) Kochek model #KS-34 Universal Storz spanner wrench set(s) with holder. One (1) Zico SCBA bottle bracket(s) mounted as directed by the Madison Hose Company. </div> </div> </div> </div> </div>		
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<div> <div>SPECIFICATIONS FOR ONE (1) 1500 GPM CUSTOM PUMPER</div> </div>	Bidder Complies	
	Yes	No
<div> <div> <div>Communication</div> <div> <p>Communication equipment to be provided by Tactical Communications inc. located in Guilford Connecticut. An allowance of 15,000 shall allotted.</p> </div> </div> <div> <div>HAND LIGHTS</div> <div> <p>Six (6) Streamlight model 44401 orange "Fire Vulcan" rechargeable hand light(s) and 12 volt charger shall be installed as directed by the Madison Hose Company. The light shall have blue LED's on the rear of the light. The charger shall be wired to the chassis battery system.</p> </div> </div> <div> <div>ADDITIONAL ITEMS SUPPLIED WITH THE VEHICLE</div> <div> <ul style="list-style-type: none"> 1 - Pint of touch up paint for each color 1 -Bag of assorted stainless steel nuts and bolts </div> </div> <div> <div>WHEEL CHOCKS</div> <div> <p>Two (2) ZICO #SAC-44 folding wheel chocks shall be mounted forward of the rear wheels on the driver side below the side running board compartments.</p> </div> </div> <div> <div>TNT Extrication Tools</div> <div> <p>_____TNT RESCUE TOOLS</p> <p>Bidders shall include an option for a TNT rescue tool system consisting of the following equipment with their bid:</p> <div> <div>Pumps</div> <div> <p>PTO Quad</p> <p>RV-ATT Remote valves (2)</p> <p>ATT6.5 Gas Pump with Nexus</p> </div> </div> <div> <div>Spreaders</div> <div> <p>BFS24 Spreader Nexus Coupling</p> <p>BFS24 Spreader Nexus Coupling</p> </div> </div> <div> <div>Cutters</div> <div> <p>BMF320 Cutter Nexus coupling 320,000psi</p> <p>BMC320 Cutter Nexus Coupling 320,000 psi</p> <p>CSC-40-RCV Confined Space Cutter Remote</p> </div> </div> <div> <div>Rams</div> <div> <p>TLS25 Telescoping Ram Nexus</p> <p>TLS40 Lightweight Telescoping Ram</p> <p>TLS50 Telescoping Ram Nexus</p> <p>XR-TLS-kit Ram Extension Kit</p> </div> </div> <div> <div>Hose</div> <div> <p>EXTH-30 Hoses 30' Nexus (2)</p> <p>HRH-100-Nexus (4)</p> </div> </div> <div> <p>**Bidder will price extrication tools as extras and will include in total truck price and also as separate price not included with truck. NO EXCEPTIONS**</p> </div> </div> </div> </div>		
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<div> <div>SPECIFICATIONS FOR ONE (1) 1500 GPM CUSTOM PUMPER</div> </div>	Bidder Complies	
	Yes	No
<div> <div> <div>MOUNTING BRACKETS</div> <div> <p>Mounting brackets shall be custom fabricated for the secure storage of the TNT rescue tool and Paratech rescue strut systems.</p> <ul style="list-style-type: none"> Mount TNT Rescue tools in driver's side rear compartment. Custom fabricate aluminum tilt-down brackets for the TNT Cutter and Spreader on roll out tray. Custom fabricate aluminum shelving bracket for one TNT Ram on roll-out tray. Custom fabricate mounts and brackets for Paratech struts in driver's side rear compartment side walls. Mount Paratech vertically for easy access: hold each strut in place with Velcro straps onto Aluminum wall mounted brackets Fabricate Aluminum box to hold all loose Paratech strut attachments. </div> </div> <div> <div>PAINT, PREPARATION AND FINISH</div> <div> <p>The PPG Delta, Low V.O.C., polyurethane finishing system, or equal, shall be utilized. A "Clear Coat" paint finish shall be supplied to provide greater protection to the quality of the exterior paint finish.</p> <p>All removable items, such as brackets, compartment doors, etc. shall be painted separately to insure finish paint behind mounted items. All compartment unwelded seams exposed to high moisture environments shall be sealed using permanent pliable caulking prior to finish paint.</p> </div> </div> <div> <div>BODY PRIMER & PREPARATION</div> <div> <p>All exposed welds shall be ground smooth for final finishing of areas to be painted. The compartments and doors are totally degreased and phosphatized. After final body work is completed, grinding (36 and 80 grit), and finish sanding shall be used in preparation for priming.</p> </div> </div> <div> <div>BODY FINISH PAINT</div> <div> <p>The body shall be finish sanded and prepared for final paint. Upon completion of final preparation, the body shall be painted utilizing the highest quality, state of the art, low V.O.C., polyurethane base paint. Finish paint shall be applied in multiple coats to ensure proper paint coverage with a high gloss finish.</p> <p>The entire body shall be buffed and detailed.</p> <p>The inside and underside of the complete body assembly shall be painted job color using a PPG Delta System, prior to installation of the body on the chassis or torque box.</p> <p>The interior of the compartments shall be finish painted with Multispec #7247 White Marble Stone scuff resistant paint to provide a protective application over all of the compartment interior surfaces.</p> <p>The body paint finish shall be PPG Delta System in a single color, to match Madison Hose Company furnished paint codes and requirements.</p> <p>The interior of the fender storage compartments (if fender compartments are specified) shall be finish painted job color.</p> </div> </div> </div>		
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<div> <div>SPECIFICATIONS FOR ONE (1) 1500 GPM CUSTOM PUMPER</div> <div>Bidder Complies</div> </div>		
	Yes	No
<div> <div>CAB PRIMER & PREPARATION</div> <div> <p>The cab primer shall be a two (2) stage process. First stage shall be a coating with a two part component, self etching, and corrosion resistant primer to chemically bond the surface of the metal for increased adhesion. Second stage shall be multiple coats of a catalyzed, two component, polyurethane primer applied for leveling of small imperfections and top coat sealing.</p> </div> <div>CAB FINISH PAINT</div> <div> <p>The entire cab shall be finish sanded and prepared for final paint. Upon completion of final preparation, the cab shall be painted utilizing the highest quality, state of the art, low V.O.C., polyurethane base paint. Finish paint shall be applied in multiple coats to ensure proper paint coverage with a high gloss finish.</p> <p>The cab exterior shall be finish painted with PPG Delta system, single color, to match Madison Hose Company's furnished paint code.</p> <p>The entire exterior finish of the cab shall be buffed and detailed.</p> </div> <div>CAB INTERIOR PAINT</div> <div> <p>The interior metal surfaces of the cab shall be painted using light gray Line-X material.</p> </div> <div>CHASSIS PAINT</div> <div> <p>The chassis frame rails, suspension and axles shall be painted black with a Polyurethane base paint prior to installation of any air lines or electric systems to ensure proper serviceability.</p> </div> <div>WHEEL PAINT</div> <div> <p>The chassis wheels, (except aluminum wheels) shall be painted job color with silver trim around the perimeter.</p> </div> <div>PAINT CODES</div> <div> <p>The paint shall match Madison Hose Company furnished paint code and layout. The paint code shall be as indicated below:</p> <ul style="list-style-type: none"> PRIMARY PAINT COLOR <p>Single Color: Pierce Red 50 Paint Code# TBD</p> </div> <div>TOUCH-UP PAINT</div> <div> <p>One (1) pint of each exterior color paint for touch-up purposes shall be supplied when the apparatus is delivered to the end user.</p> </div> <div>FINALIZATION & DETAILING</div> <div> <p>Prior to delivery the vehicle, the interior and exterior be cleaned and detailed. The finalization process detailing shall include installation of NFPA required labels, checking fluid levels, sealing and caulking required areas of the cab and body, rust proofing, paint touch-up, etc.</p> </div> </div>		
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<div> <div>SPECIFICATIONS FOR ONE (1) 1500 GPM CUSTOM PUMPER</div> </div>	Bidder Complies	
	Yes	No
<div> <div><u>RUST PROOFING</u></div> <div> <p>The entire unit shall be thoroughly rust proofed utilizing rustproof and sound deadening materials applied in manufacturer recommended application procedures. Rust proofing shall be applied during the assembly process and upon completion to insure proper coverage in all critical areas.</p> </div> </div> <div> <div><u>COMPUTER GENERATED LETTERING</u></div> <div> <p>The lettering and striping shall be custom designed utilizing state of the art computer software and computerized cutting machines. The manufacturer shall employ a full time artist / designer to generate all lettering, decals, and striping to meet the requirements of the Madison Hose Company. The artwork for the lettering and striping shall be kept on record by the apparatus manufacturer to allow for ease in duplication for the Madison Hose Company.</p> </div> </div> <div> <div><u>FRONT CAB DOOR LETTERING</u></div> <div> <p>Gold leaf, "Sign Gold", with drop shadow lettering shall be provided on the cab driver's and officer's doors per the Madison Hose Company's requirements. The design of the lettering on the cab doors shall be designed to fit in the 496 sq. inches available.</p> <p>Lettering provided on the driver's and officer's cab doors shall be 3" high.</p> </div> </div> <div> <div><u>REAR CAB DOOR LETTERING</u></div> <div> <p>Gold leaf, "Sign Gold", with drop shadow lettering shall be provided on the cab crew doors per the Madison Hose Company's requirements. The design of the lettering on the cab doors shall be designed to fit in the 496 sq. inches available.</p> <p>Lettering provided on the crew cab doors shall be 3" high.</p> </div> </div> <div> <div><u>FRONT OF CAB LETTERING</u></div> <div> <p>Gold leaf, "Sign Gold", with drop shadow lettering shall be provided on the front of the cab per the Madison Hose Company's requirements. The design of the lettering on the front of the cab shall be designed to fit in the 167 sq. inches available.</p> </div> </div> <div> <div><u>3" LETTERING ON FRONT OF CAB</u></div> <div> <p>Lettering provided on the front of cab shall be 3" high.</p> </div> </div> <div> <div><u>GOLDLEAF W/ DROP SHADOW LETTERING ON CAB SIDE PANEL</u></div> <div><u>CAB SIDE PANEL LETTERING</u></div> <div> <p>Gold leaf, "Sign Gold", with drop shadow lettering shall be provided on the cab side panel per the Madison Hose Company's requirements. The design of the lettering on the cab side panel shall be designed to fit in the 150 sq. inches available.</p> <p>Lettering provided on the cab side panel shall be 3" high.</p> </div> </div> <div> <div><u>REAR BODY LETTERING</u></div> <div> <p>Gold leaf, "Sign Gold", with drop shadow lettering shall be provided on the rear body panel per the Madison Hose Company's requirements. The design of the lettering on the rear of the body shall be designed to fit in the 167 sq. inches available.</p> <p>Lettering provided on the rear body panel shall be 4" high.</p> </div> </div>		
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	Yes	No
<p><u>CAB ROOF LETTERING</u></p> <p>Scotch-Cal without drop shadow lettering shall be provided on the cab roof per the Madison Hose Company's requirements. The design of the lettering on the cab roof shall be designed to fit in the 2500 sq. inches available.</p> <p>Lettering provided on the cab roof shall be 12" high per the Madison Hose Company and engineering design.</p> <p><u>LETTERING FONT</u></p> <p>The lettering shall be designed and cut to match lettering on existing Madison Hose Company fire apparatus.</p> <p><u>LARGE CUSTOM MADISON HOSE COMPANY LOGO</u></p> <p>A pair of custom Madison Hose Company logos shall be computer generated and will be no larger than the 1200 sq. inches available.</p> <p>The standard logo shall be printed on Gold leaf, "Sign Gold", with two computer generated printed colors.</p> <p>The custom logo shall be located as directed by the Madison Hose Company.</p> <p><u>CAB ACCENT STRIPING</u></p> <p>Accent striping shall be provided at the lower horizontal portion of the cab doors and front cowl area of cab as directed by the Madison Hose Company.</p> <p>The cab accent striping shall be made with "Sign Gold" gold leaf material, which shall be 1/2" wide with a black border.</p> <p><u>CAB PAINT BREAK ACCENT STRIPING</u></p> <p>Accent striping shall be provided on each side of the cab at the cab paint break line.</p> <p>The cab paint break accent striping shall be made with "Sign Gold" gold leaf material, which shall be 1/2" wide with a black border.</p> <p>The ends of each accent stripe shall be equipped with a custom decorative spear type #1 end, matching the accent stripe material.</p> <p><u>SCOTCH-LITE STRIPE</u></p> <p>A six (6) inch high "Scotch-Lite" stripe shall be provided. The stripe shall be applied on a minimum of 60 percent of each side of the unit, 60 percent on the rear of the unit and 40 percent on the front of the unit. The Scotch-Lite stripe layout shall be determined by the Madison Hose Company.</p> <p>The Scotch-Lite shall be white in color.</p> <p><u>REAR CHEVRON STRIPING</u></p> <p>The entire rear of the truck shall be covered with alternating strips of reflective striping.</p> <p>The striping shall be 6" Diamond Grade Scotch-Lite.</p>		
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<div> <div>SPECIFICATIONS FOR ONE (1) 1500 GPM CUSTOM PUMPER</div> </div>	Bidder Complies	
	Yes	No
<p>The Diamond Grade Scotch-Lite shall be Red and Fluorescent Yellow Green in color.</p> <p><u>WARRANTY, STARTING ON THE IN SERVICE DATE</u></p> <p>Warranty coverage by the manufacturer shall begin on the in service date of apparatus with the Madison Hose Company.</p> <p><u>WARRANTY - CUSTOM CHASSIS</u></p> <p>The specified vehicle shall include a two (2) year new vehicle warranty, upon delivery and acceptance of the vehicle. The warranty shall ensure that the vehicle has been manufactured to the proposed contract specifications and shall be free from defects in material and workmanship that may appear under normal use and service within the warranty period. The warranty may be subject to different time and mileage limitations for specific components and parts. This warranty is issued to the Madison Hose Company as the original owner of the vehicle.</p> <p>The warranty shall not apply to tires, batteries, or other parts or components that are warranted directly by their manufacturers. The warranty shall not apply to routine maintenance requirements as described in the service and operators manual. No warranty whether express, implied, statutory or otherwise including, but not limited to any warranty of merchantability or fitness for purpose shall be imposed.</p> <p><u>OVERALL UNIT AND CUSTOM CHASSIS</u></p> <p>All components and parts of the vehicle are warranted for a period of two (2) year from acceptance of the vehicle, unless excluded elsewhere in this warranty or described as having longer time limitations.</p> <p><u>WARRANTY - ENGINE</u></p> <p>The specified fire service rated engine shall be provided with a five (5) year engine manufacturer's warranty. A copy of the manufacturer's warranty shall be supplied to define additional details of the warranty provisions.</p> <p><u>WARRANTY - TRANSMISSION</u></p> <p>The specified Allison transmission shall be provided with a five (5) year warranty. A copy of the Allison transmission warranty shall be supplied to the Madison Hose Company to define additional details of the warranty provisions.</p> <p><u>WARRANTY - COOLING SYSTEM</u></p> <p>The manufacturer warrants all Cooling System Equipment components used in the construction of the manufacturer's fire apparatus against defects and workmanship provided the apparatus is used in a normal and reasonable manner. This warranty is extended only to the Madison Hose Company as the original owner for a period of three (3) years from the date of delivery / acceptance to the Madison Hose Company, whichever occurs first.</p> <p>This warranty applies to both purchased and fabricated; manufacturer supplied, coolant system components, and is not provided in lieu of any Vendor provided warranties. All coolant system components provided by the engine manufacturer are covered by the engine manufacturer's warranty only.</p> <p><u>WARRANTY - CUSTOM CHASSIS FRAME RAILS</u></p> <p>The Madison Hose Company requires that the custom chassis frame shall be warranted for an unlimited time period.</p>		
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SPECIFICATIONS FOR ONE (1) 1500 GPM CUSTOM PUMPER

Bidder
Complies

Yes No

CROSSMEMBERS WARRANTY

A lifetime warranty shall be provided on all chassis frame cross members.

WARRANTY - STEERING UNIT

The proposed Sheppard steering gear shall be warranted for a period of three (3) years from the first date of service or 150,000 miles (241,401 kilometers), whichever occurs first. The product shall be free from defects in material and workmanship under normal use in applications approved in advance by Sheppard.

WARRANTY - FRONT AXLE

The Meritor axles shall be furnished with a five (5) year warranty; the first two (2) years shall be parts and labor, the remaining three (3) years shall be parts only. Wheel seals, gaskets and wheel bearings will be covered for one (1) year providing that Meritor supplies and assembles the wheel end equipment. A copy of the warranty from Meritor shall be supplied to define additional details of the warranty provisions. For vehicles that operate full or part time outside of the United States and Canada, a one (1) year parts only warranty shall apply.

WARRANTY - REAR AXLE

The Meritor axles shall be furnished with a five (5) year warranty; the first two (2) years shall be parts and labor, the remaining three (3) years shall be parts only. Wheel seals, gaskets and wheel bearings will be covered for one (1) year providing that Meritor supplies and assembles the wheel end equipment. A copy of the warranty from Meritor shall be supplied to define additional details of the warranty provisions. For vehicles that operate full or part time outside of the United States and Canada, a one (1) year parts only warranty shall apply.

WARRANTY - ABS

The Meritor ABS shall be provided with a three (3) year warranty, parts and labor. A copy of Meritor's warranty will be supplied to define additional details of the warranty provisions.

WARRANTY - CAB STRUCTURE

The cab shall be warranted against structural defects for a period of ten (10) years from the date of acceptance of the unit. Details of warranty coverage, limitations and exclusions shall be included in the specific warranty document.

WARRANTY - BODY STRUCTURE

The body shall be warranted against structural defects for a period of ten (10) years from the date of acceptance of the unit. Details of warranty coverage, limitations and exclusions shall be included in the specific warranty document.

WARRANTY - CORROSION

The cab and body shall be warranted against rust-through or perforation, due to corrosion from within, for a period of ten (10) years. Perforation is defined as a condition in which an actual hole occurs in a sheet metal panel due to rust or corrosion from within. Surface rust or corrosion caused by chips or scratches in the paint is not covered by this warranty.

<div> <div>SPECIFICATIONS FOR ONE (1) 1500 GPM CUSTOM PUMPER</div> </div>	Bidder Complies	
	Yes	No
<div> <div> <div>WARRANTY - PAINT</div> <div> <p>The paint finish shall be warranted for a period of ten (10) years from the date of acceptance of the unit. Details of warranty coverage, limitations and exclusions shall be included in the specific warranty document.</p> </div> </div> <div> <div> <div>WARRANTY - LETTERING</div> <div> <p>The apparatus manufacturer will provide a five (5) year warranty against defects in material and workmanship for all graphic processes. Any valid claims must be made in writing within 15 days of the determination of any defects to the manufacturer's fire apparatus. The manufacturer will at its option make any necessary repairs either at a local authorized service center or at the factory, if required. The manufacturer will make the final decision as to where the repairs are to be made and any transportation costs are the owner's responsibility. The manufacturer will at its option, repair or replace any verified defects in workmanship or materials at no cost to the owner provided all the requirements of this warranty have been met.</p> <p>The manufacturer continually strives to improve its products and therefore, reserves the right to make improvements or changes without incurring any obligations to make such changes or additions on equipment previously sold.</p> </div> </div> <div> <div> <div>WARRANTY - BRIGHTWORK</div> <div> <p>The manufacturer warrants all bright finish components used in the construction of their apparatus against defects and workmanship provided the apparatus is used in a normal and reasonable manner. This warranty is extended only to the Madison Hose Company as the original owner for a period of one (1) year from the date of delivery / acceptance to the original user-Madison Hose Company, whichever occurs first.</p> <p>The expressed warranty excludes corrosion or degradation of bright finished components caused by damage to the component.</p> </div> </div> <div> <div> <div>WARRANTY - STAINLESS STEEL PLUMBING WARRANTY</div> <div> <p>The stainless steel plumbing shall be warranted for a period of ten (10) years from the date of acceptance of the unit. Details of warranty coverage, limitations and exclusions are included in the specific warranty document.</p> </div> </div> <div> <div> <div>WARRANTY - REAR SUSPENSION</div> <div> <p>The manufacturer hereby warrants to the original Madison Hose Company, that leaf spring products installed shall be free of defects in material and workmanship for one (1) year. The "Warranty Period" commences on the date the original Madison Hose Company takes delivery of the product from the manufacturer.</p> </div> </div> <div> <div> <div>WARRANTY - WATER TANK</div> <div> <p>The water tank shall be warranted by the water tank manufacturer for the "Lifetime" of the unit. A copy of the manufacturer's warranty shall be supplied to define additional details of the warranty provisions.</p> </div> </div> <div> <div> <div>WARRANTY - FIRE PUMP</div> <div> <p>Hale Products, Incorporated ("Hale") hereby warrants to the original buyer that products manufactured by Hale shall be free of defects in material and workmanship for a period of five (5) years from the date product is first placed into service or five and one-half (5 1/2) years from date of</p> </div> </div> </div> </div> </div></div></div></div></div>		
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<div> <div>SPECIFICATIONS FOR ONE (1) 1500 GPM CUSTOM PUMPER</div> </div>	Bidder Complies	
	Yes	No
<p>shipment by Hale, whichever period shall be first to expire. Within this warranty Hale will cover parts and labor for the entire warranty period.</p> <p><u>WARRANTY RELATED APPARATUS TRANSPORT</u></p> <p>Should any warranty repair require transportation of the apparatus to a repair facility outside the Madison Hose Company's town limits, the manufacturer shall provide a pickup and delivery service for the first two (2) years of warranty coverage, at no charge to the Madison Hose Company.</p> <p><u>WARRANTY - HEAVY DUTY VALVES</u></p> <p>Elkhart Brass warrants Heavy Duty Swing-Out Valves for a period of ten (10) years after purchase against defects in material or workmanship. Elkhart Brass shall repair or replace any Heavy Duty Swing Out Valve which fails to satisfy this warranty.</p> <p><u>WARRANTY - SEATING</u></p> <p>HO Bostrom shall warrant each new seat manufactured, to be free from defects in materials and workmanship when delivered to the original Madison Hose Company for a period of five (5) years.</p> <p>Labor to remove or reinstall and transportation of defective items will not be covered by, or any allowance made for said cost under this warranty.</p> <p><u>WARRANTY - GENERATOR EXTENDED WARRANTY</u></p> <p>The specified generator shall have a Three (3) Year Extended Limited Warranty, beginning when the original manufacturer's limited warranty expires. A copy of the generator warranty will be provided at time of delivery.</p> <p><u>NFPA REQUIRED LOOSE EQUIPMENT, PROVIDED BY THE MADISON HOSE COMPANY</u></p> <p>The following loose equipment as outlined in NFPA 1901, 2009 edition in accordance with the applicable requirements unless supplied by the manufacturer or sales rep organization, will be provided by the Madison Hose Company. All loose equipment will be installed on the apparatus before placed in emergency service, unless the Madison Hose Company waives NFPA section 4.21.</p> <p><u>Section 5.7 Equipment.</u></p> <p>It is the responsibility of the Madison Hose Company to ensure that all required equipment has been supplied and installed on the apparatus in order to achieve compliance with the standard prior to placing it in service.</p> <p>5.7.1 Ground Ladders.</p> <p>5.7.1.1 All fire department ground ladders carried on the apparatus shall meet the requirements of NFPA 1931, Standard for Manufacturer's Design of Fire Department Ground Ladders, except as permitted by 5.7.1.3 and 5.7.1.4.</p> <p>5.7.1.2 At a minimum, the following fire department ground ladders shall be carried on the apparatus:</p> <ul style="list-style-type: none"> (1) One straight ladder equipped with roof hooks (2) One extension ladder (3) One folding ladder <p>5.7.1.3 Stepladders and other types of multipurpose ladders meeting ANSI A14.2, Ladders - Portable Metal- Safety Requirements, or ANSI A14.5, Ladders - Portable Reinforced Plastic Safety Requirements, with duty ratings of Type IA or IAA shall be permitted to be substituted for the folding ladder required in 5.7.1.2(3).</p>		
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	Yes	No
<p>5.7.1.4 Stepladders and other types of multipurpose ladders shall be permitted to be carried in addition to the minimum fire department ground ladders specified in 5.7.1.2 provided they meet either ANSI A14.2 or ANSI A14.5 with duty ratings of Type 1A or 1AA.</p> <p><u>Section 5.7.2 Suction Hose or Supply Hose.</u></p> <p>It is the responsibility of the Madison Hose Company to ensure that all required equipment has been supplied and installed on the apparatus in order to achieve compliance with the standard prior to placing it in service.</p> <p>5.7.2.1 A minimum of 20 ft (6 m) of suction hose or 15 ft (4.5 m) of supply hose shall be carried.</p> <p>5.7.2.1.1 Where suction hose is provided, a suction strainer shall be furnished.</p> <p>5.7.2.1.2 Where suction hose is provided, the friction and entrance loss of the combination suction hose and strainer shall not exceed the losses listed in Table 16.2.4.1 (b) or Table 16.2.4.1(c).</p> <p>5.7.2.1.3 Where supply hose is provided. It shall have couplings compatible with the local hydrant outlet connection on one end and the pump intake connection on the other end.</p> <p>5.7.2.2 Suction hose and supply hose shall meet the requirements of NFPA 1961, Standard on Fire Hose.</p> <p><u>Section 5.8 Minor Equipment.</u></p> <p>It is the responsibility of the Madison Hose Company to ensure that all required equipment has been supplied and installed on the apparatus in order to achieve compliance with the standard prior to placing it in service.</p> <p>5.8.2 Fire Hose and Nozzles. The following fire hose and nozzles shall be carried on the apparatus:</p> <ul style="list-style-type: none"> (1) 800 ft (240 m) of 2 1/2 in. (65 mm) or larger fire hose (2) 400 ft (120 m) of 1 1/2 in. (38 mm), 1 3/4 in. (45 mm), or 2 in. (52 mm) fire hose (3) One handline nozzle. 200 gpm (750 L/min) minimum (4) Two handline nozzles. 95 gpm (360 L/min) minimum (5) One playpipe with shutoff and 1 in. (25 mm), 1 1/8 in. (29 mm), and 1 1/4 in. (32 mm) tips <p>5.8.3 Miscellaneous Equipment. The following additional equipment shall be carried on the apparatus:</p> <ul style="list-style-type: none"> (1) One 6 lb (2.7 kg) flathead axe mounted in a bracket fastened to the apparatus (2) One 6 lb (2.7 kg) pickhead axe mounted in a bracket fastened to the apparatus (3) One 6 ft (2 m) pike pole or plaster hook mounted in a bracket fastened to the apparatus (4) One 8 ft (2.4 m) or longer pike pole mounted in a bracket fastened to the apparatus (5) Two portable hand lights mounted in brackets fastened to the apparatus (6) One approved dry chemical portable fire extinguisher with a minimum 80-B:C rating mounted in a bracket fastened to the apparatus (7) One 2 1/2 gal (9.5 L) or larger water extinguisher mounted in a bracket fastened to the apparatus (8) One self-contained breathing apparatus (SCBA) complying with NFPA 1981, Standard on Open-Circuit Self Contained Breathing Apparatus (SCBA) for Emergency Services, for each assigned seating position. But not fewer than four, mounted in brackets fastened to the apparatus or stored in containers supplied by the SCBA manufacturer (9) One spare SCBA cylinder for each SCBA carried, each mounted in a bracket fastened to the apparatus or stored in a specially designed storage space (10) One first aid kit (11) Four combination spanner wrenches mounted in brackets fastened to the apparatus (12) Two hydrant wrenches mounted in brackets fastened to the apparatus (13) One double female 2 1/2 in. (65 mm) adapter with National Hose (NH) threads, mounted in a bracket fastened to the apparatus 		
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	Yes	No
<p>(14) One double male 2 1/2 in. (65 mm) adapter with NH threads, mounted in a bracket fastened to the apparatus</p> <p>(15) One rubber mallet, suitable for use on suction hose connections, mounted in a bracket fastened to the apparatus</p> <p>(16) Two salvage covers each a minimum size of 12 ft x 14 ft (3.7 m x 4.3 m)</p> <p>(17) Two or more wheel chocks. Mounted in readily accessible locations, that together will hold the apparatus. When loaded to its GVWR or GCWR, on a hard surface with a 20 percent grade with the transmission in neutral and the parking brake released</p> <p>(18) One traffic vest for each seating position, each vest to comply with ANSI/ISEA 207, Standard for High-Visibility Public Safety Vests, and have a five-point breakaway feature that includes two at the shoulders, two at the sides, and one at the front</p> <p>(19) Five fluorescent. orange traffic cones not less than 28 in. (711 mm) in height, each equipped with a 6 in. (152 mm) retroreflective white band no more than 4 in. (102 mm) from the top of the cone, and an additional 4 in. (102 mm) retroreflective white band 2 in. (51 mm) below the 6 in. (152 mm) band</p> <p>(20) Five illuminated warning devices such as highway flares, unless the live fluorescent orange traffic cones have illuminating capabilities</p> <p>(21) One automatic external defibrillator (AED)</p> <p>5.8.3.1 If the supply hose carried does not use sexless couplings, an additional double female adapter and double male adapter, sized to fit the supply hose carried, shall be carried mounted in brackets fastened to the apparatus.</p> <p>5.8.3.2 If none of the Pump intakes are valved, a hose appliance that is equipped with one or more gated intakes with female swivel connection(s) compatible with the supply hose used on one side and a swivel connection with pump intake threads on the other side shall be carried. Any intake connection larger than 3 in. (75 mm) shall include a pressure relief device that meets the requirements of 16.6.6.</p> <p>5.8.3.3 If the pumper is equipped with an aerial device with a permanently mounted ladder, four ladder belts meeting the requirements of NFPA 1983, Standard on Life Safety Rope and Equipment for Emergency Services shall be provided.</p> <p>5.8.3.4 If the apparatus does not have a 2 1/2 in. intake with NH threads, an adapter from 2 1/2 in. NH female to a pump intake shall be carried, mounted in a bracket fastened to the apparatus if not already mounted directly to the intake.</p> <p>5.8.3.5 If the supply hose carried has other than 2 1/2 in. NH threads, adapters shall be carried to allow feeding the supply hose from a 2 1/2 in. NH thread male discharge and to allow the hose to connect to a 2 1/2 in. NH female intake, mounted in brackets fastened to the apparatus if not already mounted directly to the discharge or intake.</p> <p><u>14.1.8.4 Fire Helmet.</u> It is the responsibility of the Madison Hose Company to ensure that "Fire helmets shall not be worn by persons riding in enclosed driving and crew areas any time the apparatus is placed in service.</p> <p>14.1.8.4.1 A location for helmet storage shall be provided.</p> <p>14.1.8.4.2 If helmets are to be stored in the driving or crew compartment, the helmets shall be secured in compliance with 14.1.11.2.</p> <p><u>14.1.10 SCBA Mounting.</u> It is the responsibility of the Madison Hose Company to ensure that any SCBA equipment has been supplied and installed on the apparatus in order to achieve compliance with the standard prior to placing it in service.</p> <p>14.1.10.1 Where SCBA units are mounted within a driving or crew compartment, a positive latching mechanical means of holding the SCBA device in its stowed position shall be provided such that the SCBA unit cannot be retained in the mount unless the positive latch is engaged.</p>		
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	Yes	No
<div> <div> <div>14.1.10.2 The bracket holding device and its mounting shall retain the SCBA unit when subjected to a 9 G force and shall be installed in accordance with the bracket manufacturer's requirements.</div> <div>14.1.10.3 If the SCBA unit is mounted in a seatback, the release mechanism shall be accessible to the user while seated.</div> </div> <div> <div>14.1.11 Equipment Mounting.</div> <div>It is the responsibility of the Madison Hose Company to ensure that any equipment installed on the apparatus by them or their subcontractor meets the following requirements prior to placing it in service.</div> <div> <div>14.1.11.1 All equipment required to be used during an emergency response shall be securely fastened.</div> <div>14.1.11.2 All equipment not required to be used during an emergency response, with the exception of SCBA units, shall not be mounted in a driving or crew area unless it is contained in a fully enclosed and latched compartment capable of containing the contents when a 9 G force is applied in the longitudinal axis of the vehicle or a 9G force is applied in any other direction, or the equipment is mounted in a bracket(s) that can contain the equipment when the equipment is subjected to those same forces.</div> </div> <div> <div>Section 15.9.3 Reflective Striping.</div> <div>It is the responsibility of the Madison Hose Company to ensure that Reflective Striping has been supplied and installed on the apparatus in order to achieve compliance with the standard prior to placing it in service.</div> <div> <div>15.9.3.1" A retroreflective stripe(s) shall be affixed to at least 50 percent of the cab and body length on each side, excluding the pump panel areas, and at least 25 percent of the width of the front of the apparatus.</div> <div>15.9.3.1.1 The stripe or combination of stripes shall be a minimum of 4 in. (100 mm) in total width.</div> <div>15.9.3.1.2 The 4 in. (100 mm) wide stripe or combination of stripes shall be permitted to be interrupted by objects (i.e., receptacles, cracks between slats in roll up doors) provided the full stripe is seen as conspicuous when approaching the apparatus.</div> </div> <div> <div>15.10 Hose Storage.</div> <div>It is the responsibility of the Madison Hose Company to ensure that any hose storage area includes a positive means to prevent unintentional deployment in order to achieve compliance with the standard prior to placing it in service.</div> <div> <div>15.10.7 Any hose storage area shall be equipped with a positive means to prevent unintentional deployment of the hose from the top, sides, front, and rear of the hose storage area while the apparatus is underway in normal operations.</div> </div> </div> </div> </div></div>		
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